PARSA, Parviz, 1941-

REFORM OF THE INTERNATIONAL MONETARY SYSTEM.

The University of Oklahoma, Ph.D., 1968
Economics, finance

University Microfilms, Inc., Ann Arbor, Michigan

THE UNIVERSITY OF OKLAHOMA

GRADUATE COLLEGE

REFORM OF THE INTERNATIONAL MONETARY SYSTEM

A DISSERTATION

SUBMITTED TO THE GRADUATE FACULTY

in partial fulfillment of the requirements for the

degree of

DOCTOR OF PHILOSOPHY

BY

PARVIZ PARSA

Norman, Oklahoma

1968

REFORM OF THE INTERNATIONAL MONETARY SYSTEM

APPROVED BY

Paul D. Dickens

A. J. Kaufmann

James M. Mogab

Thomas D. Willett

Olivier Jensen

DISSERTATION COMMITTEE

PREFACE

The author wishes to express his sincerest thanks and gratitude to a number of people for their cooperation in the completion of this study: especially to Professor Paul Dickens for his time granted for the reading of drafts and for making invaluable suggestions, for providing part of the source material, and most of all for his assistance, inspiration, and constant companionship during the study.

He also wishes to pay due respect to Professor A. J. Kondonassis, who has made valuable comments and contributed in various other ways; to Professor Ed Crim for his kind assistance and valuable comments regarding statistical matters; and to Professors James Murphy, Thomas Curtis, and Oliver Benson for their pertinent suggestions.

He also wishes to express his sincere thanks to Miss Patricia Linn, who has been most generous with her time in undertaking the editing of draft copies, to Dr. Mehdi Ghaffarzadeh for his generosity in terms of computer programming; to Miss Neosha Watterman for her assistance in library research; and to many other friends for their various cooperations.

TABLE OF CONTENTS

LIST OF TABLES

REFORM OF THE INTERNATIONAL MONETARY SYSTEM

CHAPTER I

INTRODUCTION

The Problem

In present international economic relations gold, American dollars, British pounds sterling, and occasionally a few other currencies, such as the French franc and the German mark are used as international money. These are international money because they are accepted over national boundaries of different countries. In addition to such media, from time to time several countries have had to, and still have to, resort to different international credit agreements in order to overcome either the pressure of lack of adequate international moneys or to resist speculative movements and/or balance of payments adjustment problems.

> One of the problems with the gold-exchange standard--and perhaps overlooked by its architects at Genoa--is that dollars and sterling can only be accumulated as reserves if America and Britain themselves run balance of payments deficit.[1]

---

[1]Ian Shannon, International Liquidity--A Study in the Economic Functions of Gold (Chicago: Henry Regnery Company, 1966), p. 21.

The key currency component of international money is the difference between total outlays and receipts that certain countries such as the U.S. and Britain have on their international transactions. It becomes available as international reserves "only to the extent that the key-currency country incurs a balance-of-payments deficit."[1]

A sound monetary system requires the existence of a certain amount of money in circulation--just enough and not too much. Among the factors that affect the need of a country for money are: volume of production, trade and transactions, velocity of money in circulation, payment habits of the people, and credit facilities availabel to the society. It is often believed that if there is too much money in circulation--too much with respect to the production and trade of a country--inflation sets in. If, however, there is not an adequate supply of money, trade, exchange, and transactions may have to be cut. The need for adequate media of payment holds true at the level of the international economy.

> Just as there is a relation (within limits) between the volume of domestic transactions and the need for domestic money, so is there one between the size of international trade and the need for international money.[2]

---

[1]Delbert A. Snider, Introduction to International Economics (Homewood, Illinois: Richard D. Irwin, Inc., 1963, Third edition), p. 507. Underline his.

[2]Alvin H. Hansen, The Dollar and the International Monetary System (New York: McGraw-Hill Book Company, 1965), p. 54.

The question of adequacy of international liquidity is a controversial issue which will be discussed in a later chapter. For the moment, however, it might be noted in passing that according to some authorities the growth of foreign exchange has not been sufficient to keep pace with the growing needs of international trade. Concern has also been expressed, given the possibility of devaluation, about the future value of the dollar and sterling.[1]

Furthermore, the growth of gold production of the world (as will be seen in the next chapter) has not been keeping pace with growth of the volume of international transactions. This, along with the fact that there have been, from time to time, exchange controls, currency depreciations, tariff protection, barter agreements, mutual and multilateral credit negotiations, and resort to different import devices has made some economists feel that the functioning of the present international monetary system is not smooth or satisfactory. Even those who think that the present system is basically sound would not deny that something could at least be done to improve it.

There are, of course, other people who have expressed more objections to the present international monetary system. For example, Robert Triffin has been

---

[1]This dissertation was prepared before the November 1967 pound devaluation; due to this, a foreign exchange rate of £1 = $2.80 is used throughout. See Appendix I on recent British devaluation.

concerned about the use of national currencies as international money.[1] Britain's John Maynard Keynes, in the discussions leading to the formation of the International Monetary Fund, supported the creation of an international monetary unit to be named "bancor".[2]

In this study an attempt will be made to look at the following questions:

1. What is the structure of the present international monetary system, and how did it come into existence?

2. How well does the system perform?

3. What basic proposals have been made in order to improve, change, or modify the system?

4. What are the fundamental problems that are causing divisions among those who carry on the discussion of feasible solutions, and

5. What guidelines can be derived for constructive action?

The basic concern of the study is to review critically some of the positive and negative aspects of relatively important plans which have been suggested in the

---

[1]Robert Triffin, Gold and the Dollar Crisis (New Haven, Connecticut: Yale University Press, Inc., revised edition, 1961), p. 87.

[2]See the "Proposals by British Experts for an International Clearing Union," April 8, 1943, reproduced in U.S. Government Printing Office, Proceedings and Documents of the United Nations Monetary and Financial Conference, vol. II (Washington, D. C., 1948), pp. 1548-73.

1960's for reform of the present international monetary system. In the course of this analysis several proposals will be discussed from the standpoint of their practicality, and attention will be focused on some of the possible reasons why they have failed to be accepted. Similar work has been done in this area previously,[1] but relatively recent plans were not included. Furthermore, many such analyses were indifferent with respect to evaluation of the acceptability and/or feasibility of different plans and proposals.

Significance of the Problem

The problem of international money and liquidity has become a widespread and vital concern. The countries affected can be classified into three groups (excluding the Soviet bloc):

1. Key currency countries such as the U.S. and U.K. whose continuance of large deficits "must be ruled out as a source of future reserve increases for the rest of the world."[2] Such countries' concern is not only for

---

[1]Fritz Machlup, "Plans for Reform of the International Monetary System," in Princeton University, International Finance Section, Special Papers in International Economics, No. 3, Revised (Princeton: Princeton University Press, March 1964).

[2]Group of Ten, Communiqué of Ministers and Governors and Report of Deputies on July 25th and 26th in the Hague, 7th July, 1966, p. 18; this source will hereafter be referred to as Communiqué of Ministers.

their balance of payments position but also for their international prestige, international liquidity, and the economic development of the free world.

> 2. During recent years, the growth of reserves in some parts of the world has been felt by a number of countries to have been more than adequate, an impression supported by the inflationary tendencies that have prevailed.[1]

West Germany, Japan, and France would fall in this category.

3. Finally, there are countries who feel that "the growth in the stock of monetary gold has not been, and is not expected to be, adequate to meet the reserve needs of international monetary system."[2] Developing countries would be among those in this group.

Smooth functioning of an international monetary system and adequacy of international reserves are regarded to be a matter of legitimate interest for all countries. As the Group of Ten specifies:

> We wish to stress our general agreement that the stability and smooth working of the international monetary system depend in a direct and substantial way upon the maintenance of a satisfactory equilibrium of the balances of payments of the larger countries. . . .
>
> We are agreed that, while global reserves are sufficient at present, the existing sources of reserves

---

[1] Ibid., p. 8. The Group of Ten is composed of the following countries: United States, United Kingdom, West Germany, France, Italy, Japan, Canada, Netherlands, Belgium, and Sweden.

[2] Ibid., p. 2.

are unlikely to provide an adequate basis for world trade and payments in the longer run.[1]

Reasons for the Study

This study is being made for several reasons. First, there is disagreement in the available literature as to how serious the problem is and how urgently it requires attention. Second, in recent years, there has been some dissatisfaction with the present international monetary system, lack of an international money, lack of adequate international liquidity, and temporary pressures on certain countries. Third, the topic has economic, social, and political implications. An examination of the economic aspects of these points in the light of available data is therefore necessary.

Robert Roosa has noted the difficulties which pound sterling and the dollar have been experiencing in foreign exchange markets of the world. Because of the economic distortions which several European countries have suffered, great concern over the supply of world liquidity has arisen. It is frequently during the period of such disturbance that reexamination of institutions attracts most attention. In Roosa's opinion, such a reexamination is necessary for the well-being of an orderly system in

---

[1] Ibid., pp. 17-18.

order that it might bar possible serious disturbances.[1]

Method of the Study

Exhaustive coverage of each proposal for reform is not intended; rather the method is to present the essential features of the major issues. This method is accepted basically for two reasons. First, full details of any proposal may not be of real help when the objective is the diagnosis of the direction in which one should go. Some agreement is needed on the diagnosis of a disease before any remedy can be prescribed; only when the disease is recognized should the possibility of proper cure be taken into account. Second, the discussion of the details of each and every proposal lies outside the scope of this study. Excerpts often presented in the form of quotations are merely fractions of larger documents which retain their author's assessment of how the problem should be attacked. Thus details of many proposals will not be discussed as the objective is to help provide guidelines for actual solution of the problem.

Occasional use will be made of statistical methods of analysis for the purpose of projections, estimates, and correlation among variables, along with the use of computer facilities.

---

[1]Robert Roosa, Monetary Reform for the World Economy (New York: Harper & Row, Publishers, 1965), p. 5.

Outline of the Study

After the introduction to the problem the study will attempt to analyze the present structure of the present international monetary system. Elements of the system such as gold, dollars, sterling, drawing rights on the International Monetary Fund, and the role that each plays will be discussed. The discussion will be followed by a look at the supply of and demand for international liquidity, which will be supplemented by a presentation of the factors affecting the adjustability of the system. Production of the world gold will be examined to see if it has kept pace with the growth of international trade. Then reliance on dollars and pounds as means of foreign exchange will be dealt with as other components of international reserves. It will be seen whether doubts can arise as to the adequacy of the growth of international reserves to the extent that the key currency countries do not want to incur deficits, to the extent that other countries do not want to accept the deficits of other countries indefinitely, and to the extent that gold production is increasing less than the need for international reserves. This is done in Chapter II.

A large set of proposals have been made to provide the world with more international reserves. Therefore, after the diagnosis of the vulnerability of the system, the substance of the plans for the reform of the

international monetary system will be discussed, regardless of their individual advocates or opponents. Pros and cons of each economic argument will be evaluated. This will create a background upon which further study of the major proposals can be built. The principles or arguments can be classified as a change in the price of gold, acceptance of flexible exchange rates, and increasing international understanding and/or cooperation. Each of these categories will be dealt with in Chapter III.

Based on the background of the substance of proposals, and following the same classification, a review of the proposals made in the 1960's will be undertaken in Chapter IV. Part of this chapter contains the plans that deal with gold. Another group of these proposals calls for the acceptance of a flexible exchange rate system. Still a third sector discusses the creation of an international agency either essentially along lines parallel to national central bank operations or creation of more international reserves. The proposals of Lerner, Meade, Angell, Lutz, Stamp, Bernstein, Hansen, Zolotas, Maulding and Hart-Kaldor-Tinbergen will be discussed; those of Keynes and Triffin are also included due to their pioneering significance.

Then as it is thought that the official and semi-official views may be significant in terms of their practical effect on possible solutions of the problem,

Chapter V is devoted to the evaluation of the IMF's position, the findings of the Group of Ten, and the position that the U.S. Joint Economic Committee has taken.

Chapter VI attempts to throw further light on the negotiating aspects of the problem which are often neglected in a good many proposals. The different approach of various countries whose influence on the system is significant will be covered. Within this chapter the reader is introduced to the attitudes of France, the U.S., and the U.K. as examples of different views of the industrialized countries. Focusing attention on the views of these countries necessitates considerations for the view of underdeveloped countries.

Chapter VII attempts to study the data of the past two decades in relation to international economic conditions. The data published by the IMF in International Financial Statistics will be statistically reviewed; this review will attempt to establish any behavior pattern which may be discernible through an analysis of the past records presented in the IFS. It will further attempt to see how much of the world trade as measured by imports is correlated with time, gold, international reserves, and world income separately and in relation to one another through simple and multiple correlation programs; static and dynamic multiple correlations will be undertaken to see if the introduction of a time lag affects the results

considerably. It further attempts to project the future of these variables and the consequences should the present situation be left to itself.

Chapter VIII will then try to combine the findings of the previous theoretical and statistical assertions. The objective is to help not only to understand the diagnosis of the problem but also to aid in choosing among different solutions. The chapter will set up criteria for success and in its light to judge the acceptability of various proposals. The chapter will also include the opinion of the writer and hopes to focus attention on the directions which may have a higher probability of success.

Sources

The source materials for this study will be composed of available literature and data from academic, national, and international institutions such as The Economic Journal, The Economist, publications of the International Finance Section, University of Princeton: Essays in International Finance, Special Papers, and Articles in International Economics, books by Triffin, Roosa, Hansen, etc. International Financial Statistics, Annual Reports of the IMF, and United Nations statistics will also be relied on.

CHAPTER II

STRUCTURE OF THE PRESENT SYSTEM

Explanation of the System

The present international monetary system is a set of written and unwritten rules by which countries do business with each other. Each country has a currency of its own, and since countries may want to have international trade, there has to be some orderly system for converting currency of one country into another. Thus a starting point for the system is the establishment of a rate of exchange for its money in terms of other currencies. The value of currencies, however, varies from time to time. Mere establishment of a rate of exchange for one currency in terms of another would not work well in so far as currency is stated in terms of something which has a relatively more stable value--such as gold, then each nation can, by establishing a par value for its currency in terms of gold, tell foreigners what the currency is worth in terms of gold--and indirectly in terms of other currencies; this makes orderly trade possible.

After a country becomes a member of the IMF, the

par value of its currency is formally announced to the Fund, and for convenience each nation may establish the value of its currency in terms of U.S. dollars. Thus, for example, a Canadian dollar is worth 92.5 U.S. cents. As a government announces a par value for its currency, it also agrees, according to the rules of the IMF, to maintain that value within prescribed limits by official engagement in the foreign exchange market any time that private supply and demand tend to move the price outside the permitted limits. Since the U.S. government stands ready to buy and sell gold at $35 an ounce, any country's gold can be turned into dollars and vice-versa. Here then comes another important stage of the system: countries hold both gold and dollars (or pounds, and even other currencies) in their reserves: of course, the proportion of these two elements of reserves held depends on their confidence in various types of reserves, on their customs, financial ability, etc.

To intervene in the foreign exchange market for the purpose of maintaining their foreign exchange rates governments may have to resort to their reserves of gold and/or foreign exchange.

To support the price of its currency a government may have to lose all or part of its reserves. The loss of reserves, be it in gold, dollars, or otherwise, may not be taken lightly by any country; in fact, it is taken as a

signal that a country must try to improve its balance of payments. In addition to the use of reserves, a country can borrow from the IMF, or from individual countries,[1] or it can simply devalue its currency. Thus the present international monetary system is based on: 1) existence of domestic currencies, 2) establishment of a par value in terms of gold for each currency; the relative par values in terms of gold determine the official rate of exchange, and 3) establishment of a rate of exchange between different currencies. In this system then, gold, currency reserves, the IMF, and bilateral and multilateral agreements each play a role.

Elements of the System

Gold

For centuries gold ownership has been desired by human beings. According to some writers, notions of the value of gold are not based solely on mysticism.[2] The fact that there is a fixed price for gold and that it is uneconomical for any one country to increase its production

---

[1]Much of this section is based on the simple, yet thorough, explanation of Edwin L. Dale, in his article "International Monetary System Meets a Test" reprinted in Warren L. Smith and Ronald Teigen, Readings in Money, National Income, and Stabilization Policy (Homewood: Richard D. Irwin, Inc., 1956), pp. 480-4.

[2]Armen A. Alchian and William R. Allen, University Economics (Belmont, California: Wadsworth Publishing Company, Inc., Second Printing, 1964), p. 644.

of gold to unlimited amounts due to increasing cost of production has placed gold supply beyond the control of any one country; for these reasons gold has long been regarded as a safe form of holding wealth. Furthermore,

> People have sought for good reason to own gold and use it widely as money. It is portable, easily recognizable, readily divisible, and storable. In a world ridden with unstable governments and threats of confiscation of wealth or expulsion from a country, people find gold a relatively attractive form in which to own wealth (consider the problems of hiding and secretly transporting peanuts, cotton, steel, or land.)[1]

In the words of Robert Roosa, "Because gold has been tested as a store of value through the centuries, while man-made monies have suffered violent changes, most countries will wish to include some gold in their reserves."[2] Roosa further asserts that

> In the international monetary system as it has evolved, gold has become a pillar of stability, while reserve currencies and credit facilities have been built around it to carry the bulk of the regular burdens of fulfilling the reserve needs of individual countries.[3]

Thus the acceptance of gold as a principal element in reserves makes the following questions pertinent. What is the current annual gold production? What are the prospects for its future production? Will gold production keep pace with the growing needs of international trade?

---

[1] Ibid., p. 644.

[2] Roosa, op. cit., p. 15.

[3] Ibid., p. 10.

A. H. Hansen asserts:

> As became evident after World War I, the world's gold supply has not been increasing rapidly enough. For one thing, much of it was hoarded. Even allowing for hoarding, gold production has not kept pace with the growing needs of world trade and international transactions.[1]

To test whether available statistics support or contradict such assertions, a statistical method was used on the basis of the following information. Table 1 shows world gold production for the years 1945 through 1966. (The span of years for two decades seems an appropriate sample size.) Upon plotting a scatter diagram for the data of Table 1 it became evident that there is not a linear relation between world gold production and time (measured in years) for the decade of 1955-1964. Then, applying a "second degree curve"[2] which seemed to best fit the data, the following regression equation was obtained: $Yc = 757.126 - 2.083t + 1.738t^2$.

In the above formula Y designates gold production; the subscript c next to it stands for computed value or

---

[1]Hansen, op. cit., p. 57.

[2]It is necessary to note that when a scatter diagram was drawn for world gold production in the decade of 1955-65, a linear regression line did fit the data, but a sample of only one decade seemed to be inappropriately small for projection. Accordingly, data were carried back to the extent that they covered the period after WWII. As this was done, and as a scatter diagram was drawn for two decades covering 1945 to 1964, a straight regression line could no longer fit the data. Hence application of a "second degree curve."

TABLE 1

WORLD* PRODUCTION OF GOLD: 1945-1966
(in Millions of U.S. Dollars†)

Year	Gold Production
1945	736
1946	752
1947	767
1948	785
1949	818
1950	845
51	827
52	852
53	849
54	898
1955	940
56	980
57	1019
58	1051
59	1127
1960	1178
61	1215
62	1300
63	1354
64	1400
1965	1440
66	1442

Source: International Monetary Fund, International Financial Statistics, vol. 6, no. 9 (Washington, D.C., Sept., 1953), p. 29 for 1945 figure; vol. 8, no. 9, Sept., 1955, p. 19 for the years 1946 through 1954; vol. 18, no. 5, May, 1965, p. 14 for the years 1955-1964, and vol. 20, no. 7, p. 14 for the years 1965 and 1966.

*Excluding the Soviet Area.

†In millions of U.S. Dollars at 35 dollars per fine ounce.

estimate of gold production; on the basis of a least square method; t designates time or year(s); and figures in the formula are simply coefficients of the regression line that the formula presents. On this basis, one can project the amount of gold production (Y) for any year (t) after 1966 simply by substituting the desired year (t) in the formula.

If the evidence of past production of world gold can be used as a criterion for estimating its future production,[1] it can be projected, on the basis of the above equation and computer results, that world gold production in 1974 would be about 2259.836 million U.S. dollars.

Table 2 shows world trade indices which show that the world import index has risen from 100 (which is taken by OECD to be the base corresponding to the year 1953) to a level of 180 in 1962. Through the application of a cumulative interest rate formula it can be calculated that this 80 per cent increase over the decade of 1953-1962 gives a 6.1 per cent cumulative rise per annum. If the

---

[1]Two points deserve special attention: 1) better use of gold, 2) problem of gold hoarding. Better uses of gold can affect its supply. For example, no less than $2.7 billion worth of gold was released for international purposes by withdrawing gold from internal circulation. On the problem of gold hoarding Professor Hansen believes that after World War I, it became evident that much of the world's gold supply was hoarded. Exactly how much of the gold supply has been hoarded, Hansen does not say, and perhaps there is no accurate way of measuring this magnitude, as it may take place quite hiddenly. See Hansen, op. cit., p. 57.

TABLE 2

WORLD TRADE
(Value in Millions of U.S. Dollars and Index)

Year	(1) Value of Imports (cif)	(2) Index of Imports
1950	59331	88
51	81390	98
52	80186	98
53	76563	100
54	79596	106
1955	88968	118
56	98122	127
57	107010	135
58	100800	133
59	106700	144
1960	119400	160
61	124600	168
62	132400	180
63*	143600	197
64	160800	210+
1965	175000	228+
66	191700	250+

Source: OECD, General Statistics Bulletin, Part 2, 1964, p. 41 for column (2); IMF, International Financial Statistics, vol. II, no. 5 (Washington, D. C., 1958), p. 23 for the years 1950 through 1957; vol. 18, no. 5, 1965 for the year 1958, and vol. 20, no. 8, August 1967, p. 35 for the years 1959 through 1966.

*Second Quarter

+Index of imports for the years 1964 through 1966 were not available in the above OECD bulletin. They are computed, accordingly, on the basis of comparison between 1953 (=100) and the figures for the value of imports for these years; not seasonally adjusted.

Notes: (1) Seasonally adjusted indices.
(2) The import indices are assumed in the Bulletin to be identical to the export indices.

figure of gold production in 1953 be taken as a base, it can be seen that world gold production over the same decade has increased by a little over 53 per cent, which would give a cumulative annual rate of growth of 4.35 per cent, or much less than the increase in world trade.

The above data, then, suggest that the rise in world gold production has not kept pace with the rise in world trade. The statistical test supports Hansen's assertion that "world gold supply has not been increasing rapidly enough"[1] to keep pace with the growing needs of world trade. To the extent that world trade has been increasing more than gold production, increasing reliance on dollars, pounds sterling, and credit agreements between central bankers and governments has been inevitable. Such arguments are based on the assumption of a constant price for gold ($35 per ounce), because, obviously, a rise in the price of gold may make its production more profitable.

Miroslav A. Kriz, after making an analysis of gold and its role in international payments, comes to a conclusion that is worth quoting: "To recognize that, so far ahead as can be seen, continued use should be made of gold in the international monetary system is simply practical realism."[2]

---

[1]Hansen, op. cit., p. 57.

[2]Miroslav A. Kriz, "Gold: Barbarous Relic or Useful Instrument?" Princeton University--International

For reasons to be discussed in the next chapter, the idea of raising the price of gold does not seem acceptable. Yet, this assertion should not be interpreted to mean that there is no advantage whatsoever in raising the price of gold. Undoubtedly, it is possible to assume that such a step would lessen the problem of international liquidity. Exactly how much this price should be changed if that alternative were adopted, under what arrangements, and how--whether gradually or once-and-for-all--are topics which would require econometric studies. It can, however, be asserted that solution of the problem of international liquidity is possible without raising the price of gold. This will be discussed in Chapter III of this study.

So far nothing has been said about the problem of gold hoarding. Due to the existence of gold hoarding, not all gold produced becomes available for the use of monetary authorities. As gold still constitutes a vital component of international reserves, the discussion of international liquidity should touch, at least briefly, upon this topic. Appendix II is therefore devoted to gold dishoarding. At this point, it is sufficient to note that the world's monetary liquidity can be increased by drawing the amount of hoarded gold into the monetary use; yet, it is not the theme of this study to recommend gold dishoarding as a

---

Finance Section, Essays in International Finance, No. 60 (Princeton, N. J.: Princeton University Press, June, 1967), p. 29.

long run and effective method of resolving the problem of international liquidity.

Dollars and Sterling

Any time total U.S. and U.K. payments to the world exceed their receipts, dollars and sterling will be available as international reserves. But for this very reason, the amounts of dollars and sterling available to the world will depend on how ready the U.S. and U.K. are to have deficits in their balance of payments and also on how ready other countries are to accept and hold dollars and sterling. One disadvantage of this system of exchange reserves is that if the U.S. and U.K. are successful in eliminating their deficits as presently hoped for, the world would be deprived of any increase in present holdings of dollars and pounds for reserves.

> It has been argued, for example, that a serious shortage of international reserves is almost certainly in the offing, especially if the United States is successful in eliminating its deficit. And even more disquieting is the viewpoint of some authorities that the present gold-exchange standard, based as it is on reserves held largely in the form of certain key currencies, is inherently unstable and peculiarly biased toward the generation of periodic liquidity crises, such as that which led to the devastating monetary upheavals that characterized the decade before World War II.[1]

The volume of official claims against the dollar (that is, the extent to which the dollar is being used for

---

[1]Harry D. Hutchinson, Money, Banking, and the United States Economy (New York: Appleton-Century-Crofts, 1967), p. 350.

reserve purposes by other monetary authorities) amounted to $14.3 billion in May, 1967.[1] This and similar data, can be taken as an indication of how widely dollars are used. Why are dollars and pounds so widely used in international transactions?

Several answers can be given to this question. First, attention may be focused on some reasons which can be found in the writings of Shannon. He mentions that until 1913, England was the major center for both short and long term credit because of its significant role in world trade. As London became the center of the world's remittance mechanism, both tradition and time gave a value to sterling equal to that of gold.[2] Shannon goes on to say that further needs of international liquidity and the fact that gold supply could not be increased as fast made some countries withdraw gold from domestic circulation. Furthermore, nations started to hold national currencies, in addition to gold as buffers against changes in their balance of payments. Finally, referring to the fact that "the key currencies needed to be both widely acceptable and unlikely to depreciate in terms of one another or against gold," and that "the key currency countries also needed appropriate banking facilities," Shannon concludes,

---

[1]Board of Governors, Federal Reserve System, Federal Reserve Bulletin, vol. 53, no. 8, August 1967 (Washington, D. C.), p. 1446.

[2]Shannon, op. cit., p. 19.

"only the United Kingdom and the United States had sufficient standing in international trade and banking to meet these requirements."[1]

Roosa believes that "the dollar became the center of a system that was much more flexible and much more capable of responding to shifting needs than any system based upon gold alone."[2] An even more convincing reason is that

> The dollar reached its preeminent position, of course, during and immediately following World War II when there was in reality no other currency available to play a world role and when so much of our government assistance was made available in freely usable dollars.[3]

Finally, businessmen around the world have come to know dollars and sterling so well that they do not want to go through the additional trouble of making themselves familiar with how much other monies are worth in terms of gold, dollars, or sterling. If a foreign trader is paid in dollars for his sales, as soon as this payment is made these dollars become international money.[4] Furthermore, the U.S. has guaranteed a fixed price of gold since 1934 at $35 an ounce, and has stood ready to honor this price

---

[1] Ibid., pp. 20-21.

[2] Roosa, op. cit., pp. 17-18.

[3] Ibid., p. 23.

[4] Hansen, op. cit., p. 55.

through various periods of stress.[1] Importance of the U.S. economy in world trade, credit availability to other countries, willingness of some central bankers to use dollars--and sterling--, rather than gold for international settlement and ready convertibility of dollars into gold can all throw some light on why dollars are acceptable.

IMF

In today's international monetary system the role of the International Monetary Fund should not be neglected. Countries have drawing rights at the IMF, part of which can be regarded as readily available upon the Fund's decision to release them to the country in case of need.

> Countries that are members of the Fund have turned over a portion of their reserves to it and this entitled them to the use of the Fund's reserves. The IMF has set up formal procedures to calculate the funds available to a country.[2]

IMF loans take the form of the exchange of one country's currency for another currency that the country in question needs. The Fund's resources are available to eligible members on an essentially short term and revolving basis to provide members with temporary assistance to contribute to the solution of their payment problems.[3] Table 3 shows the magnitude of the Fund's operations. The Fund's

---

[1]Roosa, op. cit., p. 22.

[2]Richard Ward, International Finance (Englewood Cliffs, N. J.: Prentice-Hall, Inc., 1965), p. 181.

[3]IMF, International Financial Statistics, vol. 18, no. 5, May 1965, p. 4.

TABLE 3

IMF NET CURRENCY SALES*
(As of March 31, 1965,
Expressed in Millions of U.S. Dollars)

Argentina	175.0
Brazil	177.0
Chile	125.0
Columbia	102.5
India	225.1
Indonesia	102.5
United Arab Republic	144.2
United Kingdom	981.4
United States	296.4
Yugoslavia	60.0
Other Countries	332.7
Total	2721.8

Source: IMF, International Financial Statistics, vol. 18, no. 5 (Washington, D. C., 1965), pp. 2-3.

*With the exception of Yugoslavia, only figures larger than $100 million have been quoted; for other countries, see the above source. It is interesting to note that figures for Germany (Federal Republic) and France are respectively -683.3 and -444.9 million dollars which means that their repayments to the Fund exceed their drawings. The above source indicates that "Exchange transactions with the Fund take the form of members' purchases (i.e., drawings) from the Fund of the currencies of other members for equivalent amounts of their own currencies" (Ibid., p. 4.); and that "A member's purchases of currency from the Fund must be repaid by repurchases or by the purchase of that member's currency by another member." (Ibid., p. 5.)

Note: As of the same date there was $1865.8 million repayment to the Fund.

attitude in this respect is a liberal one, so far as requests for transactions are within the first credit tranche, namely, "transactions which bring the Fund's holdings of a member's currency above 100 per cent but not above 125 per cent of its quota," provided that the member in question makes reasonable efforts to solve its problems.[1]

Provision of short term finance is, however, only one area of IMF operations. Other important functions of the IMF may be categorized under support of the system of multilateral settlement--what Triffin has called "convertibility a la 1959"[2]--and collaboration with the contracting parties to the General Agreement of Tariffs and Trade in

> the dismantling of restrictions on international payments and trade, and in the formulation and enforcement of appropriate 'rules of the game' to minimize the ill effects of such restrictions as survive the dismantling process.[3]

The remainder of this subsection attempts to throw further light on the functioning of the IMF in terms of convertibility and support of the system of multilateral settlement.

---

[1]International Monetary Fund, Compensatory Financing of Export Fluctuations (Washington, D. C., February 1963), p. 11.

[2]Triffin, op. cit., p. 19.

[3]Brian Tew, "The International Monetary Fund: Its Present Role and Future Prospects," Princeton University--International Finance Section, Essays in International Finance, no. 36 (Princeton, N. J.: Princeton University Press, March, 1961), p. 3.

With respect to restrictions on trade and payments it must be borne in mind that there is a division of responsibility between the Fund and the G.A.T.T., the former being concerned with restrictions on payments, the latter with restrictions on trade. Restrictions on trade thus lie within the realm of G.A.T.T., hence it will be eliminated from this discussion of the IMF. Tew suggests, however, that:

> since the two kinds of restrictions are frequently alternative means to the same end, the choice between them being largely a matter of administrative convenience, it would probably have been more efficient to have entrusted the supervision of both kinds of restriction to one and the same international agency.[1]

With respect to the support of the multilateral settlement system, after the return of some European countries to convertibility in 1958, the world has been operating "on a monetary regime more or less on the lines of the one which was established in the late 1920's."[2] The success or failure of the IMF is a matter of value judgments among economists and lies outside the scope of this analysis.[3]

The Fund's rescue of sterling from speculative pressures in the spring of 1961 was dramatically successful.

---

[1] Ibid., p. 11.

[2] Ibid., p. 8.

[3] See, for example, Snider, op. cit., pp. 493-503; The source of the previous footnote is also an interesting discussion of the various aspects of the IMF operations.

It has also been successful in attracting the confidence of many countries from both blocs. "The Fund offers to members the facilities of a club where they can explain their actions and intentions, lodge complaints, negotiate informal understandings, and coordinate their monetary policies."[1] The Fund is also a platform for weighty pronouncements of worldwide significance; it also shares with G.A.T.T. the job of removal of artificial barriers to international trade and payments. It must be noted, however, that the effect of the IMF upon international liquidity is, after all, limited, and sometimes conditional to the willingness of the countries to adopt corrective measures. If the effect of the Fund on international liquidity were not limited, the world might not now be facing the problem of international liquidity. Furthermore countries tend to regard their own reserves in a different light from their IMF drawing rights.

Functional Aspects of the System

Supply of Liquidity

According to the IMF, the average rate of growth of foreign exchange reserves amounted to 4.3 per cent per annum, that of gold reserves to 1.6 per cent per annum, and that of gold tranche position to 7.6 per cent over the decade of 1954-1964. Combining these three items, the

---

[1]Tew, op. cit., p. 10.

Fund has found an average annual rate of growth of 2.8 per cent per annum.[1]

Looking into the supply of international liquidity one can notice the following innovations. The innovations which are chosen for brief description here are typical but not inclusive of all happenings which have affected the supply side of international liquidity and have had the objective of maintaining the existing system of fixed exchange rates (for currencies of the IMF members are fixed within one per cent limits around the par value).

(1) The IMF instituted in 1952 what is usually referred to as "stand-by credits." This is an "advance" given by one country to another guaranteeing that a certain amount of foreign currency can be drawn by a member over a specified period subject to the limiting conditions of the IMF. When this advance guarantee is extended to another country, it can be considered a "given" factor in that country's balance of payments policy. Such "stand-by credits" can be regarded as automatic drawing rights, and from this standpoint they can perform the same function that owned reserves of the country would, if there is a need to rely on such sources. These credits have been of benefit to a number of underdeveloped countries and some developed ones.

---

[1]IMF, 1964 Annual Report (Washington, D. C.), p. 30.

(2) There have also been increases in the IMF quotas of member countries, for example, by 50 per cent in 1959 and by 25 per cent in 1964. Adjustments were made in each case in the quotas of individual countries to allow for change in their international economic position. Closely related with these increases is the discussion to make the gold tranche fully automatic.

(3) General Arrangements to Borrow, adopted in 1962 is another device to further the ability of the IMF to increase international liquidity. The so-called Paris Club or Group of Ten and the IMF reached an agreement in December, 1961 which was put into effect in October 1962. According to these arrangements, the participating countries "would stand ready to loan their currencies to the Fund" when and if the countries and the Fund agree that additional reserves and resources are needed to support the international monetary system.[1] Massive "rescue operations" of the pound were accomplished in 1964 and again in 1965.

(4) Since 1962, the United States has employed

---

[1]The resources pledged by each country are as follows (all in millions of U.S. dollars): U.S., 2000; U.K., 1000; W. Germany, 1000; France, 550; Italy, 550; Japan, 250; Canada, 200; Netherlands, 200; Belgium, 150; Sweden, 100; all amounting to a total of 6 billion dollars. "No country is under obligation to advance funds unless, at the time a request is made, the country agrees with the IMF that support is urgently needed." Hansen, op. cit., p. 96.

"currency swaps." These have taken the form of exchanges of currency between the U.S. and another country whose currency is relatively stronger in the foreign exchange markets. The proceeds of these "swaps" are used by the U.S. to support the dollar, and are presumably used to repurchase foreign currency for dollars when the dollar regains strength. The major objectives of such agreements are to combat temporary speculation against the dollar (such as could have occurred at the time of Kennedy's assassination) and short-term capital outflows.

(5) The U.S., in order to reduce the pressure on the dollar and finance the U.S. deficit without gold losses, has sold to other countries the so-called "Roosa bonds" (named after Robert Roosa, then Under-secretary of the U.S. Treasury) which are intermediate term U.S. government securities. To eliminate the possibility of loss to lenders due to dollar devaluation and to increase acceptability of these bonds they are denominated in the currency of foreign countries. These bonds have been sold to the Central Banks of a number of countries but especially to Italy, Switzerland, and Germany. As an example, in 1963 such bond sales amounted to $702 million. The advantage of these bonds from the standpoint of the U.S. is that the short term dollar liabilities are converted to intermediate-term liabilities, hence giving additional time to the U.S. to correct its balance of payments deficit and at the same

time saving some gold which could have been demanded by the holders of short term claims against the dollar. Lending countries would, presumably, benefit from dollar stability and monetary order[1] as well as the interest rate.

(6) There was also a London gold pool formed in 1961--a "gentleman's agreement" between some industrially advanced countries (Switzerland and most of the Group of Ten[2])--under which they agreed to pool gold sales

---

[1]For further discussion, see the testimony of Robert Roosa in U.S., Congress, Joint Economic Committee, Hearings, "The United States Balance of Payments," part I (Washington, D. C., July 8 & 9, 1963), pp. 96-101. A member country can purchase from the IMF a stated amount of the currency it wishes to have in exchange for an equivalent amount of its own currency. The aggregate drawing rights of a member on the Fund is closely linked to the size of its quota. Drawing of a member within the limits of its quota is almost automatically granted. This is referred to as "gold tranche," and because of its relatively automatic nature it is unconditional. The IMF also has a liberal policy toward drawings of a member not exceeding an additional 25 per cent of its quota. This is referred to as "the first credit tranche" and due to its semi-automatic nature may also be regarded as unconditional. Of course, the member country must make reasonable efforts to overcome its payments problems, and in this sense its drawing is conditional. But compared to the following case it can be regarded unconditional. For drawings of larger amounts than 125 per cent of its quota, a member is expected to make "intensive efforts"--usually a comprehensive program of fiscal and monetary measures--to overcome its difficulties. Drawings over 125 per cent of a member's quota are referred to as "higher tranches" and are thus "conditional."

[2]For the list of participant countries in London gold pool see Appendix I.

and purchases on the London gold market. The Bank of England is to act as an agent, and the aim is to stabilize the price of gold against speculative demand when the dollar and the pound are weak. After the establishment of this pool, the price of gold has been more effectively stabilized in the range of $35 per ounce plus or minus shipping costs.

Such a list of monetary cooperation can well be expanded. These are, however, adequate to show the magnitude and the nature of long run operations. The first three improvements--stand-by credits, General Arrangements to Borrow, and increases in the quotas--can be regarded to be innovations within the IMF; the last three are outside of it. They further show that the basic objective of all these is to avoid a world monetary crisis. Each has necessitated greater coordinated action among industrially advanced countries as well as more cooperation. How adequate they are in their scope remains to be seen. If the fact that the IMF has, in recent years, undertaken to study reserve creation more seriously (as will be explained later in this chapter) is interpreted as a sign of realization of the possible inadequacies in the future supply of international liquidity, then one can perhaps derive the conclusion that international reserves don't seem to be adequate to the IMF, at least in their present stage:

> . . . The factors which have determined the growth in liquidity during the past decade seem likely to provide a smaller annual rate of growth over the decade to come. The net addition to official gold holdings arising from gold production and sales by the Soviet Union, less the non-monetary uses of gold, may well in the years ahead be larger than in most recent years; even so, however, it could hardly be expected that the annual rate of increase of monetary gold holdings would exceed 2-2½ per cent. . . . It must be assumed that payments deficits of the United States will not contribute to the formation of reserves in future on the same scales as in recent years. It therefore seems safe to forecast that in the future greater reliance than over the past decade will have to be placed on the provision of international liquidity, as needed, by other means. . . .[1]

One should also consider short run fluctuations in the supply of international liquidity. During short-term periods, determined as being less than one year in discussions of international economics, world temporary crises (such as the recent Middle East crisis), confidence factors affecting gold hoards, and conditions governing gold production influence the supply of gold for monetary purposes. Reserves increase when key currency countries are in deficit and decrease when they are in surplus. On these grounds one may safely hold that the supply of international liquidity in the short run is too dependent on factors which may not be responsive to the need for liquidity and may have no relation at all to the need for liquidity. In this connection, one should not forget that there are elements in the present system which do respond to

---

[1]The 1964 Annual Report, op. cit., p. 31.

variations with need; the IMF's lending operations are one example.

Demand for Liquidity

In defining international liquidity attention is focused on the fact that such liquidity is to be used, according to the Fund, for adjustment and correction of deficits in balance of payments. Fritz Machlup has given a similar definition for liquidity: "By liquidity of a monetary authority one means its capacity to make payments to other countries if its foreign receipts were to drop or stop."[1]

Taking the growth of the world economy as well as a larger international trade and investment into consideration, one can, without adhering to a quantity theory of money, hold that more extensive world trade may need greater international liquidity. Furthermore, if it seems likely that increased world trade would involve greater absolute disequilibria in balances of international payments, the need for liquidity can be increased greatly.

Classifying countries into two groups--industrialized and developing countries--the Fund projects that the needs of each would be larger in the future for the following reasons. The developing countries would want to

---

[1]Fritz Machlup, "The Need for Monetary Reserves," Princeton University, International Finance Section, Reprints in International Finance, No. 5 (Princeton, N. J.: Princeton University Press, October 1966), p. 1.

"be able to avert undue disturbance to their development programs because of temporary or unexpected balance of payments difficulties"; and for the former "it is important that liquidity considerations should not inhibit industrialized countries from pursuing policies designed to liberalize trade and to augment capital flows and development aid."[1]

The IMF further asserts that in the decade before 1964, the value of international trade rose at an average rate of 5.8 per cent per annum, and the value of international financial transactions increased probably more than that.[2] This estimate roughly corresponds to the figure of a 6.1 per cent annual increase in world trade calculated for a ten-year period as shown in this chapter.[3]

Factors such as liberalization of capital movements among financial centers and their probable future policy coordination would obviously have some bearing on the need for international liquidity. Yet there is no precise way of knowing what exact form they would take, in what direction and by what means they will go. Measurement of the net impact of these factors, especially in the

---

[1]The 1964 Annual Report, op. cit., p. 29.

[2]Ibid.

[3]See above, p. 19.

long run, is a difficult task. Private capital movements may also affect the demand for liquidity in either direction and could operate as a helpful or as a hampering factor. "On balance it seems prudent to assume no decline in the magnitude of payments disequilibria relative to the value of international transactions"[1] and trade.

The Relation Between Process of Adjustment of International Payments and International Liquidity

One of the functions of international liquidity or arrangements for credit facilities between nations is to provide time for adjustment. "To be sure, external liquidity readily available to a deficit country, can, if wisely used, enable that country to move to restore balance between its earnings and its expenditures abroad in an orderly manner."[2] This is, in fact, one reason why some economists believe the problem of adjustment will be automatically reduced or eliminated as more international liquidity is provided.

Provision of international liquidity is a means of financing disequilibria, and it must be viewed in conjunction with the process of adjustment of international payments. Long ago, Article I (v) of the IMF Agreement paid attention to the interrelation of these two aspects.

---

[1] Ibid., p. 30.

[2] Robert Roosa, "Balance of Payments Adjustment and International Liquidity," Journal of Finance, vol. 19 (March, 1964), p. 1.

> The Fund is to make its resources available to members; it is to do so, however, under adequate safeguards, in order to provide members with an opportunity to correct maladjustments in their balance of payments, without, however, resorting to measures destructive of national or international prosperity.[1]

Undoubtedly the volume of international liquidity and/or its nature plays a significant role in aggravating or easing the problems of adjustment in balance of payments. One must remember that promotion of economic growth and a high level of employment as well as the maintenance of price stability are predominant objectives of economic policy in today's economies. Countries are also likely to pay attention to the adjustment in their balance of payments only in so far as this does not contradict their domestic objectives. This is clarified by one of the U.S. monetary authorities in the following manner:

> Most countries consider it imperative to work toward processes of international adjustment which are consistent to the fullest practicable degree with their domestic goals for the maximizing of employment, the minimizing of economic fluctuations, and the encouragement of growth, within that environment of price stability which best promotes these other aims. . . .[2]

As a general rule one can safely assert that if the volume of international liquidity is so tight that the countries participating in international transactions find it impossible or difficult to correct the disequilibria in

---

[1]The IMF Agreement, Article I (v), reprinted as Appendix I in Tew, "The International Monetary Fund: Its Present Role and Future Prospects," op. cit., pp. 29-37.

[2]Journal of Finance, op. cit., p. 5.

their balances of payments without resort to restrictive controls--which may very well be destructive to national or international prosperity--an increase in the volume of international liquidity is desirable. If, on the other hand, there is an abundant demand in the international economy such that countries do not really have to resort to restrictive measures, caution would be appropriate in order not to expand international liquidity.

The question remains "How much liquidity is adequate?" This would, of course, vary from time to time depending on the rate of growth in world production, the willingness of countries to use international trade as a means of increasing the standard of living of their populace and their general economic and social welfare, the degree to which they participate in international transactions, etc. Thus any generalization with respect to the question of adequacy in all circumstances will most likely be incorrect. A rule of thumb, however, is provided by Tibor Scitovsky:

> There is a lively discussion going on today of whether or not the supply of international liquidity is adequate; and if not, what would constitute an adequate level. There is much disagreement and little hope of its being resolved. All parties to the argument, however, seem to agree on one thing: if the supply of liquidity were to be brought to what is considered an adequate level, all would wish to keep it stable at that level, or, at most, increase it at an annual rate of three percent--which is the limit to which respectable economists are willing to stretch the meaning of

> the word stable, as a concession to the realities of our expanding universe.[1]

More specifically, judgments as to the adequacy of international liquidity relative to balance of payments adjustments should take into account the probable effect of liquidity on the policy of countries participating in trade.

> With relatively fixed exchange rates, inadequate international reserves predispose countries, and hence the world economy, toward slower growth rates, deflationary economic policies, and restrictions on movements of goods and productive factors. Inadequate reserves increase the world's proneness to crisis in foreign exchange markets. Insufficient reserves can also disrupt normal patterns of international trade and payments and lead to a reduction in the level of foreign trade and investment. Contrastingly, with excessive international reserves, prices in the world economy tend to rise secularly and productive factors tend to be malallocated. The goal is to find the 'golden mean' between these untenable positions so that the volume and liquidity of international reserves is just adequate.[2]

Obviously, countries benefiting from increases in international liquidity may have a tendency to pursue more liberal and expansionary (or at least less contractionary) policies with respect to their capital movements and trade. Thus one may expect that an increase in international liquidity, apart from the greater maneuvering facilities which it will

---

[1]Tibor Scitovsky, "A New Approach to International Liquidity," in American Economic Association, The American Economic Review, Vol. LVI, No. 5 (December 1966), p. 1212.

[2]M. O. Clement, Richard L. Pfister, and Kenneth J. Rothwell, Theoretical Issues in International Economics (Boston: Houghton Mifflin Company, 1967), p. 402.

provide for the deficit countries, will exert, by and large, an upward pressure on the general level of employment, demand, and possibly prices. By the same token, a decrease in international liquidity is likely to have the opposite effect.

Thus in the words of the IMF annual report:

> Countries that are tending to fall into persistent payment deficits should be willing to pursue less expansionary policies than they would otherwise prefer, though they should not be expected to endure situations of high or prolonged unemployment of resources or economic stagnation. Again, countries that are tending to run into persistent surpluses should be willing to pursue, within limits, a more expansionary policy than they would have been inclined to adopt for purely domestic reasons.[1]

More on what countries can, or should, do in terms of adjustment relative to international liquidity will follow. Before this, however, it would seem appropriate to divide the disequilibria in balances of payments into two general categories: transitory or temporary, and long term disequilibrium. If the disequilibrium in balance of payments is of a transitory nature, there is no necessity and urgency for counteraction as the IMF has had occasion to observe in a recent report. According to this report, if a sound set of policies is being followed

> . . . no change in them would be needed to meet payments difficulties that are due solely to temporary situations in foreign markets, or to such factors as a temporary fluctuation in crops. The mere fact of a

---

[1] 1964 Annual Report, op. cit., p. 27.

> falling off in exports would not be taken as an indication that a corrective program was necessary or that the corrective program already envisaged should be intensified.[1]

If, on the other hand, the disequilibrium in the balance of payments is not of a temporary nature and due to unexpected temporary fluctuations in export earnings, then there must be some attempts to correct it, especially if it is of a deficit nature. Obviously the necessary condition for attempting any corrective measure is that the country in question must have given adequate weight to the considerations relevant to the balance of payments.

In consideration of the range of policy possibilities that a country can resort to for the sake of balance of payment adjustment, the following points are significant:

1. The ability of a country to resort to corrective measures in its balance of payments depends on the range of policies open to it; the wider this range, the better it will be able to adjust by maintaining or quickly restoring external balance while at the same time avoiding undue contraction, stagnation, or unemployment.

2. Today, fiscal and monetary policies show themselves as desirable tools of adjustment in balance of payment. The classical medicine of adjustment is that

---

[1] Compensatory Financing of Export Fluctuations, op. cit., p. 11.

"deficit countries should apply fiscal and monetary restraint in order to remove their deficits, and that surplus countries should undertake fiscal and monetary expansion in order to eliminate their surpluses."[1]

3. With respect to the use of fiscal and monetary policies one must take the following points into account:

a. Since in modern economies at least some costs and prices are rigid in a downward direction, international adjustment in terms of costs, prices, and incomes should, if possible, take the form of increases in productivity more than proportionate to the increase in costs and prices.

b. In addition to fiscal and monetary policies which would be on a domestic basis, there are opportunities for countries to try to adjust to a disequilibrium through international cooperation if adequate liquidity is lacking, e.g. through unilateral tariff reductions by the surplus country, advance debt repayment arrangements, etc.

c. If disequilibrium is caused by capital movements, which may well be speculative in nature, arrangements may be made to curb such movements through international cooperation of monetary policies by harmonizing the rate of interest, percentage of tax on investment, etc.

---

[1]Arthur Smithies, "The Balance of Payment and Classical Medicine," in Finn B. Jensen and Ingo Walter, Readings in International Economic Relations (New York: The Ronald Press Company, 1966), p. 126.

d. Finally one may pay attention to the assertion of J. M. Keynes who wrote:

> I do not suppose that the classical medicine will work by itself or that we can depend on it. We need quicker and less painful aids of which exchange variation and overall import control are the most important. But in the long run these expedients will work better and we shall need them less, if the classical medicine is also at work.[1]

4. If the disequilibrium is very serious, the country can--with the permission of the IMF, if it is a member of the Fund--resort to changing its rate of exchange and restrictive controls. This is not, of course, precluded by the par value. But devaluation should only be resorted to if no other effective course of action is available, and especially if the barriers to the effective use of fiscal and monetary policies are insurmountable. Also to rely on restrictive controls is hazardous in that it may bring retaliatory actions from others. Therefore reliance on restrictive measures and/or devaluation should rather be used as a last resort.

> 5. A proper use of policies . . . should make it possible to correct and reverse balance of payments disequilibria within a reasonably short period, without prolonged unemployment or stagnation in deficit countries or undue inflationary pressures on surplus countries. It is appropriate that the payments gap during this period of adjustment should be bridged by the use of international liquidity.[2]

---

[1] J. M. Keynes, "The Balance of Payments of the United States," Economic Journal, LVI, No. 222 (June, 1946), p. 171.

[2] 1964 Annual Report, op. cit., p. 28.

6. It must not be forgotten, however, that if a country is too liberally supplied with international reserves, this may postpone its adjustment to a probable fundamental disequilibrium and may perhaps affect its eventual adjustment, thus making this adjustment more difficult. On the other hand, abundant international reserves insure that the country does not have to adjust to the disequilibrium through trade and exchange restrictions, deflation, exchange rate adjustments, etc. Thus adequate international reserves would enable a country to incur temporary disequilibrium in its balance of payments while holding its exchange rate steady. In view of the fact that today countries would not want to allow a drop in their income and employment, exchange rate adjustments are ruled out and imposition of direct controls is frowned upon.

Performance of the System

How well is the international monetary system functioning? This seems to be a controversial question to which different authors have given different answers. And in most cases, their answers are based on--or biased by--their value judgments.

One group holds that the gold exchange standard is basically sound, and it can be improved either with the adoption of the additional key currencies or with continuing increase of dollar and sterling reserves. Advocates

of this group have sometimes asserted that mutual cooperation and assistance among central banks, or reserve creation with overdraft facilities available to deficit countries, and reserve creation by the world central banks can also improve the system.

Opponents of such views assert that a system based on a fixed price of gold is basically vulnerable in that this fixed price has not facilitated increasing amounts of gold for the world trade, and that dollar and pound availability depends upon U.S. and U.K. willingness to accept deficits. Among this group, some go as far as suggesting an abolition of the gold-exchange standard. Exactly what type of a system should substitute a future gold-exchange standard is something on which there is no agreement.

The range of agreement is so narrow that it is difficult to arrive at specific conclusions regarding the performance of the system. The key parameters, however, are adequacy or inadequacy of the growth of monetary reserves, the change in the gold-holding position of different countries, the adjustability of the system, the concern of underdeveloped countries, and the vulnerability of the system. Each of these parameters will be briefly analyzed in an attempt to look at the performance of the system.

Adequacy of the System

With respect to gold. Asserting that gold production

has not kept pace with the growing needs of world trade and other international transactions, Professor A. Hansen speaks of several measures which have been taken to economize on gold.

> Gold coin was withdrawn from circulation. Gold was freed for international use by reducing the gold cover for domestic currencies. And finally, countries were encouraged (Genoa Conference of 1922) to keep a part of their international reserves in the form of foreign exchange, specifically in liquid dollar and sterling holdings.[1]

The same point is supported by Ian Shannon when he says: "Many countries responded to the need to increase their own international reserves by withdrawing gold from internal circulation."[2] He goes on to cite International Currency Experience of the League of Nations as an evidence of his assertion and holds that between 1913 and 1925 no less than $2.7 billion worth of gold was released for international purposes by this technique.[3] One can be convinced that the growth of the rate of gold production has not been adequate, otherwise such measures of gold economizing would not have been needed logically. Furthermore, increasing reliance has been placed on dollars and pounds.

With respect to reserves: The question of adequacy --or supposed inadequacy--of reserves is subject to more controversy. On the one hand, one is facing the conviction

---

[1]Hansen, op. cit., p. 57.

[2]Shannon, op. cit., p. 20.

[3]Ibid.

of the ministers and governors of the Group of Ten who hold that:

> As concerns liquidity, the ministers and governors are agreed that, for the international monetary system as a whole, supplies of gold and reserve currencies are fully adequate for the present and are likely to be for the immediate future.[1]

They have further added, at a later point, that "in view of the adequacy of the supplies of gold and reserve currencies in the present and in the near future, there is no immediate need to reach a decision as to the introduction of a new type of reserve asset."[2] This Group finally concludes that studies can therefore be pursued without undue haste.[3] It can, however, be clearly seen that the group is not as sure as it sounds when they say: "But, having recognized the uncertainties concerning the future supplies of monetary reserves, we agreed that such studies are timely and should be put in hand without delay."[4]

On the other hand, another group believes that reserves are inadequate. "It has been contended, for

---

[1]Group of Ten, Ministerial Statement of The Group of Ten and Annex prepared by Deputies (10th August, 1964), p. 1. This Statement is issued by M. Valery Giscard D'Estaing (Ministre des Finances et des Affaires Economiques of France) acting as chairman of the Ministers and Governors of the Group of Ten Countries. For short, this Statement will hereafter be referred to as Ministerial Statement.

[2]Ibid., p. 12.

[3]Ibid.

[4]Ibid.

example by Sir Roy Harrod, that reserves have grown too slowly during the last ten or twelve years."[1] A group of UN experts undertook an analysis of this subject, and came to the conclusion that the total stocks of international reserves were inadequate![2]

It is not a simple task to try to compromise these opposing views. As Robert Roosa has rightly mentioned, there are contradictory motives for reform in the international monetary system. On the one hand, "less developed countries, who believe that liquidity is far too small to permit adequate expansion of their own economies and of the flows of world trade and capital,"[3] would favor the idea of enlarging the capacity for liquidity creation. On the other hand, "some of the critics, and these have been mainly from surplus countries recently undergoing inflationary pressure, have felt that a reserve currency system by its nature necessarily generates too much liquidity."[4]

Financial problems of underdeveloped countries should not be confused with the problem of the international monetary system. This phase of the subject will be analyzed in a later section. For the moment, however,

---

[1] Machlup, op. cit., pp. 15-16.

[2] Ibid., p. 16.

[3] Roosa, op. cit., p. 42.

[4] Ibid., p. 41.

one can share the opinion of the Group of Ten as it appeared in a later study of July, 1966: ". . . we have come to the conclusion that the supply of reserves from traditional sources--gold and reserve currencies--is unlikely to keep pace with legitimate demands, at any rate in the long run."[1] The words of this quotation can be accurately checked against the words "fully adequate" in their previous assertion as quoted on page 50 above. It seems that the Group, after a more careful analysis of the question of adequacy, has found more reasons to be convinced that the problem, if not attacked, may remain unsolved in the long run. This assertion is further supplemented with the following comment: "Most of us are agreed that, although the precise moment for deliberate reserve creation is not clearly discernible at present, it would be prudent to begin preparing for such a contingency now."[2] On another occasion, the report mentions specifically that:

> . . . In the longer run some understanding with regard to the composition of reserves would become necessary in any case in order to adjust reserve policies to the declining share of gold in total reserves which will inevitably come about.[3]

Change in Gold-holding Position of Selected Countries.

Attention may now be focused on some of the practical

---

[1] Communiqué of Ministers, op. cit., p. 7.

[2] Ibid., p. 18.

[3] Ibid., p. 5.

results of the operation of the system. Table 4 shows, judging on the basis of 1953 and 1964 comparisons, that industrial countries can be divided into three groups:

First there are the countries like France, Germany, Italy, and Japan whose international liquidity positions have improved in terms of both gold and foreign exchange holdings.

Second there are countries like the U.S. and the U.K. (the key currency countries) who have lost part of their gold reserves.

Third are countries like Sweden and the Netherlands whose positions of gold holding and exchange reserves have gone in different directions between 1953-1964. To what extent these types of changes can be tolerated by different countries depends on how they look at it. Some countries have shown increasing reluctance to hold on to their dollars.[1] Others, like the U.S., have become more concerned with their balance of payments, and its deficit has become a cause of anxiety and concern to the government and the public.

> The U.S. gold stock fell 28 percent (only) between December, 1957, and June, 1962. These events have revealed the vulnerability of an international monetary system that depends upon international reserves held largely in national currencies and that is anchored by the link between gold and the dollar. It has become evident that a flight of funds

---

[1]France is a striking example from this standpoint; See The French Position in Chapter VI below.

TABLE 4

INTERNATIONAL GOLD AND FOREIGN EXCHANGE HOLDINGS OF SELECTED COUNTRIES
(End of Period: Millions of U.S. Dollars)

Country	Gold		Foreign Exchange	
	1953	1964	1953	1964
United States	22091	15471	----	432
United Kingdom	2263	2136	283	179
France	617	3729	212	1376
Belgium	776	1451	312	540
Netherlands	737	1688	426	396
Switzerland	1458	2725	310	398
Germany	325	4248	1411	2721
Italy	346	2107	422	1571
Sweden	219	189	315	688
Canada	986	1026	841	1658
Japan	18	290*	874	1496*

Source: IMF, International Financial Statistics, vol. 18, no. 5 (Washington, D. C., May 1965), pp. 16-17.

*For the third quarter

> from the dollar could force the United States to suspend gold sales, devalue the dollar, impose exchange controls, or adopt some other unpalatable alternative.[1]

Adjustability of the System

During recent years it has become necessary on certain occasions to extend the amount of international monetary cooperation. In addition to the help of the IMF in removing certain pressures from specific currencies,[2] there have been a number of swap agreements (a network of reciprocal credit arrangements between the U.S. authorities and the monetary authorities of a number of other countries), and General Arrangements to Borrow (GAB).

The spring of 1961 saw an upward revaluation by slightly less than five per cent in the Netherlands guilder and the West German mark. This revaluation, coupled with expectation of further revaluations, created some concern over possible depreciation of other currencies such as the British pound, especially in view of its weak balance of payments position.

> The run on sterling was stemmed, and then reversed, by the quick and effective support given to it, first by a number of European Central Banks which extended more than $900 million short-term credits to the

---

[1]See James G. Ingram's article: "A Proposal for Financial Integration in the Atlantic Community" in U.S. Congress, Joint Economic Committee, Factors Affecting the United States Balance of Payments, 87th Cong., 2nd Sess., (Washington, D. C.: U.S. Government Printing Office, 1962), p. 177.

[2]e.g., in 1961 for pound sterling as the next paragraph explains.

British government, and secondly by massive assistance from the IMF.[1]

The above example as well as the existence of GAB and other mutual agreements between central bankers shows that the system has been somewhat responsive to the pressures of time. But even if the system has been adjustable in the past, it would not necessarily have this feature in the future. Taking the long run aspects of world prosperity and the international monetary system into account, one comes to believe that the problem should not be left unsolved and that it would be to the benefit of the world if economists would decide to attack it.

So far it has been established that:

1. Dollars and pounds would become available to the world in the final analysis, only to the extent that the U.S. and U.K. stand ready to continue their deficits and/or other countries are ready to accept them.

2. The supply of gold, at the current fixed price, has not increased rapidly enough to keep pace with the needs of world trade, and in the words of Robert Triffin "Inadequate gold supplies are supplemented, in such a system, by a growing accumulation of national key currencies as international reserves."[2]

3. The role of key currency has put responsibilities

---

[1]Snider, op. cit., p. 497.

[2]Triffin, op. cit., p. 145.

on the U.S. and U.K. to preserve the value of their currencies and has also made them responsible as world bankers.

4. At the same time, some countries, such as France, do not feel easy at allowing the U.S. to decide the world's need for liquidity on its own initiative alone on envious grounds. France wishes to become the world central banker and is the chief opponent of the U.S. in the international monetary affairs, and as such fears the possibility of over-expansion of dollars.

5. There is another aspect to the problem: that is the concern of the underdeveloped countries with the world's liquidity. This will be taken up next.

The Concern of Underdeveloped Countries

A. Hansen and many other economists have held that "the very survival of the free world requires a degree of international cooperation that transcends a strictly business calculus."[1] It is also widely accepted that these countries desperately need capital with which to grow. However, their monetary and financial problems are different from those of advanced countries in that they are more a result of a structural capital shortage, rather than lack of adequate international liquidity. True, their interests and concern "are linked in a trading world which requires an international medium of exchange and international

---

[1]Hansen, op. cit., pp. 264-265.

institutions designed to promote world wide trade and finance,"[1] but it would be safe to assume that whether or not they possess adequate international liquidity would depend much on the structure of the individual economy and is more deeply rooted in the underdeveloped nature of the economies.

It should not be denied that the well-being of underdeveloped countries, at least partially, depends on how well the international monetary system functions; obviously the better the system functions, the more they may take advantage of it, and the easier it becomes for them to fulfill their international payments obligations.

In this respect, a group of underdeveloped countries has stated deep interest in international liquidity and believe that there is a need for urgent action in the field of international monetary policy.[2] These countries offered the following arguments to demonstrate that they have "very real liquidity problems:"

> Wide fluctuations in the export earnings of developing countries. . . .
> Relatively minor events such as a small error in forecasting the balance of payments, or an unforeseen bunching of imports, or congestion in the docks, or port strikes. . . .

---

[1] Ibid., p. 264.

[2] United Nations, Committee on Invisibles and Financing Related to Trade, Memorandum on International Liquidity submitted by Argentina, Brazil and 21 other developing countries to the U.N. Conference on Trade and Development on its special session January 27-February 4, 1966, Geneva, Supplement No. 4, pp. 7-10.

> Economic growth of these countries . . . would naturally increase their need for liquidity.
> The large variations to which domestic food production is subject in these countries also call for additional amounts of short-term finance.
> Quite often these countries have "humps" in their external debt service obligations, which also can be dealt with effectively with a larger cushion of reserves.
> The intensive investment programmes in these countries often result in the creation of productive capacity which, at some stage or other, outruns the domestic supplies of raw materials and intermediaries. The developing country concerned then has to choose between operating at less than optimum capacity, with adverse effects on costs and on the international competitive position of its exports of manufactur, and importing residual requirements. Yet, owing to the inadequacy of reserves, such imports are often impossible. . . . .
> In some cases, even short-term and relatively small capital outflows generated by speculative factors, etc. tend to upset the balances of payments of developing countries in much the same way as in the case of developed countries. . . .[1]

Yet one could safely assert that the problems of capital shortage, lack of technical know-how, inadequate training of human resources, as well as other problems of such countries would have to be attacked from "within" these countries; and that even if the international liquidity were adequate, it could only facilitate their growth, rather than solving these problems structurally. For these reasons it should be contended that the problems of capital shortage in underdeveloped countries, even though closely connected with international liquidity, should not be confused with it.

---

[1] Ibid., p. 7.

In view of the above analysis, one can assert that the international monetary system is, and has been, vulnerable in that gold production is not sufficient for the growing needs of world trade, that a key currency becomes available as international money only to the extent that the key currency countries incur a balance-of-payments deficit, and that the growth of international reserves has not kept pace with the growth of international trade. There are, of course, other objections to the use of national currencies as international money, to the possibility of danger of collapse of the international monetary system (if those holding a key currency decide to withdraw large amounts from the key currency countries), and to the mechanism of balance of payments adjustments.

CHAPTER III

ANALYSIS OF THE SUBSTANCE OF PROPOSALS FOR REFORM

In order to build a foundation upon which to base the support of any particular program, one has to analyze carefully the contents of different proposals, and familiarize himself with their pros and cons. Such analysis could then be utilized for subjective judgement concerning their value.

To cope with the problem of the international monetary system a number of plans have been propounded. Each of these proposals is frequently associated with the name of one or more economists, e.g., the Bernstein Plan, the Posthuma Plan, the Zolotas Plan, etc. From the standpoint of substance one may classify these proposals into three general groups: 1) raising the price of gold, 2) accepting freely flexible exchange rates, 3) increasing international understanding and/or cooperation either in the form of creating new powers for the IMF, IBRD, or in the form of creating other international agencies which could create international money. It is the purpose of this chapter to look into the substance of proposals for reform.

A Change in the Price of Gold

A number of economists, such as Sir Roy Harrod, hold that because the price of gold was fixed at $35 an ounce after 1934, and because of the increase in costs of gold production, it is not always profitable for gold miners to increase their production. At the same time they assert that the problem of inadequate liquidity cannot be solved by insisting on too low a level of gold production. The solution they have brought forward would, according to their line of reasoning, be a revaluation of gold, thus making more international liquidity possible.

The results of an upward revaluation of gold, according to its proponents are an increase in the annual additions to the gold stock and the up-valuing of existing stocks of gold in the reserves of each country. The two effects together, proponents of this set of solutions assert, would facilitate international liquidity so long as the system relies on gold. More specifically, Machlup presents their arguments in the following manner:

> If for example, the price of gold is doubled, an ounce of gold will be worth $70 rather than $35 and, as long as money supply, commodity prices, and trade volume have not yet increased, the ratio between the monetary gold stock and all those magnitudes with which it is usually compared will be doubled too. There may also be an increase in the annual increments to the gold stocks of the free world through new gold production (and perhaps also through sales from the stocks of U.S.S.R. and other holders of gold). Without any physical increase in the annual supply of gold, the annual increase in terms of dollar or other currencies would be twice as high as now; with a physical

> increase in gold production, its money value would be higher still (and the same is true for sales from Russia and from non-monetary gold stock). Assuming, for example (though it is not likely), that a doubling of the price were to cause a 50 per cent increase in the physical quantity of gold supplied, the money value of the quantity annually supplied would increase by 200 per cent, which would mean a tripling of the value of the annual increment to the gold reserves of the free world.[1]

As can be seen from the manner in which the argument is presented, the expected results of an increase in the price of gold depend on a conditional assumption: "as long as money supply, commodity prices, and trade volume have not yet increased"; this may not always be true.[2] The question is, of course, the abstract nature and validity of such assumptions, of which no one can safely be sure.

Furthermore, there are a number of other serious objections to such proposals:

1) Since gold is not divided fairly among different countries, those who have more of it, such as the U.S., may benefit more than those who do not. This may widen the already unequal distribution of gold possession in the world. Moreover, since natural gold deposits are not equally distributed over the world, then from the standpoint of production certain areas such as South Africa and

---

[1] Machlup, "Plans for Reform . . .," op. cit., p. 62 (underlines not in the original).

[2] See Don Patinkin, Money, Interest and Prices (New York: Harper and Row, Publishers, 1965), especially chapters 3 through 9.

Russia[1] which have richer natural reserves may benefit more from gold revaluation. Besides, the ratio of gold to the total international media of payments of each country varies; thus countries holding part of their reserves in the form of foreign exchange may have to suffer a capital loss. Theoretically, of course, they might be compensated, but whether or not and how this compensation would be effected remain open questions.

2) A more serious objection may be read from the following lines:

> Nobody could ever have conceived of a more absurd waste of human resources than to dig gold in distant corners of the earth for the sole purpose of transporting it and reburying it immediately afterward in other deep holes, especially excavated to receive it and heavily guarded to protect it.[2]

In a more recent study Miroslav A. Kriz states his opinion, which seems acceptable, in the following words:

> Returning to the price of gold, I will restate two objections to a gold price rise that I continue to consider valid.

---

[1]U.S.S.R. gold holdings are estimated at possible $7 billion or more, and U.S.S.R. gold production in 1957 at about 600 million dollars, nearly equal to that of South Africa, and four times as large as that of the next largest gold producing country, Canada. See Oscar L. Altman, "A Note on Gold Production and Additions to International Gold Reserves," IMF Staff Papers (Washington, D. C., April 1958), p. 282.

[2]Robert Triffin, "Tomorrow's Convertibility: Aims and Means of International Monetary Policy," in Banca Nazionale Del Lavoro, Quarterly Review, No. 49 (June, 1959), p. 142; reprinted in Snider, op. cit., p. 514.

> The first is that a gold appreciation . . . would bring about a sudden surge in the purchasing power of current gold output and accumulated reserves. . . . Furthermore, a gold-price rise might mistakenly be regarded as a substitute for the effective measures that nations will have to take to deal with the manifold issues of international trade and investment of the late 1960's. The fundamental task the world is facing is to promote economic growth, productivity, and viability within a broad framework of economic and financial freedom. The world could deceive itself in thinking that a gold appreciation could, in some undefinable but automatic way, solve these fundamental problems.[1]

He goes on to say: "The second objection is that a gold-price rise would add fuel to world-wide fires of inflation. . . ."

3) The idea of a rise in gold price is also regarded by some to be a negation of what gold fundamentally stands for: a safeguard against clearly excessive discretionary powers of governments.[2]

4) Assuming the desirability of raising the price of gold, the levels to which it should be raised cannot be left an open question: there must be econometric studies to see exactly how much it should be raised and whether it should be a gradual increase. Even if the idea of maintenance of the gold price at its 1934 level imposes a handicap on the international monetary system, it must not be forgotten that this fixed gold price is what has made gold a point of reference for national currencies. Besides, it should

---

[1] Kriz, op. cit., pp. 26-28.

[2] Ibid., p. 29.

not be forgotten that even if one admits that a fixed price of gold does impose limitations on the international monetary system, one cannot be convinced that an increase in the price of gold is the only way to cope with the problem.

5) If the price of gold were raised, gold hoarders would be "rewarded" for their actions. This may, in turn, psychologically prepare them to expect further revaluations and engage in further hoardings which could very well be a destablizing factor.

6) If countries who benefit from an increase in the price of gold are going to compensate other countries who have suffered losses, there arises a complicated question of how much of the profit obtained by the sudden rise in gold's price ought to be given to countries adversely affected by the rise in price.

7) "At the fixed $35 price in terms of gold, the dollar has itself become a tradition. Much of the confidence now gained by many other currencies throughout the world is, in turn, rooted in that tradition."[1]

8) Furthermore, as Roosa has rightly added, it is not quite a simple matter to neglect the obligations that the United States has accepted:

> One (such obligation) is that the United States, by virtue of its immense size within the trading markets

---

[1]Roosa, op. cit., p. 18.

> of the world, cannot for the forseeable future expect to be able to exercise an independent judgement in determining its own exchange rate vis-á-vis the rest of the world. Any attempt to devalue the dollar by writing up the price of gold would assuredly be matched, within hours, by comparable and offsetting action on the part of virtually every other country. The United States would be foreclosed by its size, if it were not already prevented by its committed obligations, from unilateral devaluation. Thus unable to change its parity against other countries, the United States would find that all that would remain from an increase in the price of gold would be the indicated profit from the markup on whatever was the stock of gold held by the United States at the time. . . . Moreover, the strength of the assurance provided for the world monetary system by the continuance of the United States selling price would also be undermined if our bid were lowered or withdrawn. . . . One final reason for maintaining the existing position of the United States in buying and selling gold at the $35 price is the reinforcement that this gives to the continued role fulfilled by the United States as principal banker for the world. . . .[1]

9) Finally, an increase in the price of gold is the same thing as a devaluation of the dollar in terms of gold.[2] For a variety of objective and subjective reasons, the U.S. is unwilling to devalue the dollar.[3] It is argued that a change in the price of gold would make the present system more vulnerable. True, the U.S. dollar originally owed its value to the economic strength of the U.S. and to the guarantee of redemption in a fixed quantity of gold; some economists today, however, argue "gold is valuable

---

[1] Ibid., p. 18 and p. 21.

[2] Abba P. Lerner, "Let's Get Rid of our Cross of Gold" in Jensen and Walter, Readings in International Economic Relations, op. cit., p. 217.

[3] See Ibid., p. 218.

because it can be exchanged for dollars rather than the other way around."[1]

In view of the disadvantages mentioned above, the arguments for an upward increase in the price of gold--or stated differently, a devaluation of dollars--do not seem convincing.

Flexible Exchange Rates

Another set of proposals for the reform of the international monetary system can be categorized as the acceptance of flexible exchange rates. It would seem advisable to take up the pros and cons of this type of argument. Attention will therefore be focused first on the proposed advantages then on the disadvantages of a flexible exchange rate system, and finally an evaluation will be made of the arguments.

Advocates of a system of flexible exchange rates maintain that it has the following advantages:
1) If such a system were allowed, the need for international monetary reserves would be avoided, because, so the argument runs, alert traders will provide adequate facilities for the hedging of risks of exchange rate changes through their constructive speculation. It is further asserted that when exchange rates are free to vary, this would mean that "as any one country's external performance

---

[1] Ibid., p. 218.

slips behind that of most other countries, its exchange rate also begins to slip, giving a clear signal of the need for corrective action without the need to pay out reserves."[1] George Halm further asserts in connection with this subject that "assuming insufficient coordination of national economic policies and a shortage of international reserves, we are forced to abandon fixed rates of exchange in favor of a more flexible system."[2] Arguments in favor of the proposal also state that so long as rates of exchange are not fixed, they will not move very much: "instead they will steady out at the true relationship determined by markets, which are always wiser than bureaucrats."[3]

2) Advocates of this argument further believe a flexible rather than fixed rate of exchange would be more consistent with the principles of a market economy. This group would, therefore, like to accept market forces for exchange rate determination in many Western countries for determining the price of many commodities. When a flexible exchange rate system is used,

> instead of allowing reserves to fluctuate and so fill the gap left from movements between a short-fall or

---

[1]See R. Roosa, op. cit., p. 27.

[2]George Halm, "Fixed or Flexible Exchange Rates?" in Factors Affecting the United States Balance of Payments, op. cit., p. 259.

[3]Roosa, op. cit., p. 26. At this point Roosa is stating the arguments of the advocates of flexible exchange rate.

> excess in the balance of payments, the exchange rate may instead fluctuate to equate, or attempt to equate the supply and demand for foreign currencies.[1]

3) Under favorable conditions, so the argument runs, adjustments can take place without forcing major internal price or income changes which are not always acceptable as a means of correcting the balance of payments disequilibrium.[2]

4) It should be noted here that a flexible exchange rate system is close to a freely fluctuating in that it allows the maintenance of an essentially free market; it differs, however, from a freely fluctuating rate system in that it involves "conscious intervention in the exchange market" by a stabilization fund or monetary authorities for the purpose of influencing the rate. Triffin asserts,

> a hard core of validity in the theory of flexible exchange rates is that exchange rate readjustment to realistic levels is preferable to vain and costly attempts to preserve unrealistic exchange levels through persistent reserve losses, foreign borrowings, or trade and exchange restrictions.[3]

It is interesting to note that Triffin speaks of gold revaluation and flexible exchange rates under a title of "two false solutions" for reform of the international

---

[1]Shannon, op. cit., p. 61.

[2]Two examples can be cited: a) the U.S. did not want to deflate its domestic incomes, prices and costs in order to correct the deficit in its balance of payments in the first 10 years after the war. b) Germany did not inflate--the rules of the gold standard--domestically in order to get rid of its 1957-1961 surplus. See Meade's plan in the other chapter.

[3]Triffin, op. cit., p. 85.

monetary system; yet he does accept the above advantage as a "hard core of validity."[1]

5) The flexible exchange rate is further defended by some economists on the ground that,

> it would keep the exchange rate continuously near the equilibrium level, would shoulder a substantial part of the adjustment burden, would make it unnecessary to manipulate interest rates predominantly on the basis of balance of payments considerations, would permit to insulate the domestic economy against unwelcome effects of economic policies in other countries, and would greatly reduce the need for reserves of international liquidity.[2]

The idea of flexible exchange rates is strongly supported by what is known as the Chicago School approach[3]; furthermore, from time to time, it has received support from other groups such as the Brookings Institution.[4]

---

[1] Ibid., p. 85.

[2] Halm, op. cit., pp. 265-266.

[3] See, e.g., Milton Friedman, "The Case for Flexible Exchange Rates," Essays in Positive Economics (Chicago: University of Chicago Press, 1953), pp. 157-203; Frank D. Graham, "The Cause and Cure of 'Dollar Shortage,'" Essays in International Finance, No. 10 (Princeton: Princeton University Press, 1949); Gottfried Harberler, Currency Convertibility (Washington: American Enterprise Association, 1954); James E. Meade, "The Future of International Trade and Payments," The Three Banks Review, No. 50, June, 1961; W. M. Scammell, International Monetary Policy (London: Macmillan & Co., Ltd., 1961); Egon Sohmen, Flexible Exchange Rates, Theory and Controversy (Chicago: University of Chicago Press, 1961); Charles R. Whittlesey, International Monetary Issues (New York: McGraw-Hill Book Co., 1937).

[4] The Institution's idea is to utilize both fixed and flexible parities. See: U.S., Congress, Joint Economic Committee, Hearings, Outlook for the United States Balance of Payments, 87th Cong., 2d Sess., December 12-14, 1964, p. 258 ff.

Yet, for reasons to be discussed below, the idea has never been popular in politics and business. In this respect, one can even go as far back as October 22, 1933, when President Roosevelt announced in a radio broadcast:

> Our dollar is not altogether too greatly influenced by the accidents of international trade, by the internal policies of other nations and by political disturbances in other continents. Therefore the United States must take firmly in its own hands the control of the gold value of our dollar. . . . As a further effective means to this end, I am going to establish a government market for gold in the United States.[1]

Even today many governments are reluctant to make even occasional alterations in par values.

Against these advantages, one can cite the following disadvantages of a flexible exchange rate:

1) One weakness of a system of flexible exchange rates is that "it can be misinterpreted as an invitation to the national economic authorities to disregard the foreign payments implications of their domestic actions."[2]

2) A system of flexible exchange rates is also criticized on the ground that it inevitably leads to a competitive exchange depreciation and/or conflicting stabilization fund policies. Furthermore, it may create additional risks which tend to discourage international trade.

3) A creditor would not want to lend to, or invest in, a

---

[1]Reprinted in Board of Governors of Federal Reserve System, Federal Reserve Bulletin, November 1933, p. 699.

[2]G. Halm, "Fixed or Flexible Exchange Rates?", op. cit., p. 260.

country whose currency is depreciating, and if a loan is expressed in units of a creditor's currency which is appreciating, the borrowing country would find it hard to meet its obligations. Therefore, as far as long-term international capital movements are concerned, one can safely hold that they would be seriously impeded if exchange rates were permitted to fluctuate.

4) One can further assert that a system of flexible exchange rates needs the control or supervision of an international agency, such as the IMF, which can see to it that the participating members hold near-equilibrium. This ought to be taken into consideration from the standpoint of its practicality.

5) George Halm holds that "other things remaining equal, the introduction of flexible exchange rate would greatly reduce the need for international reserves because price changes would maintain equality between supply and demand."[1] This is not a convincing argument because not only do other things remain equal only under a ceteris paribus framework of analysis, but also price changes which in this context mean price of foreign exchange might not be sufficient enough--or even in the right direction--at all times.

6) The rate of exchange--price of foreign currencies--

---

[1] Ibid., p. 260.

plays the same role in the international economy as domestic money does at home. One of the features of money at a domestic level is that it should be acceptable, and a necessary-but not sufficient-condition for its acceptability is that it must enjoy a relative degree of stability. Economic calculations of people and businessmen are often based on a seemingly firm degree of stability of money. The same might hold true in the international economy, and international money too should enjoy some degree of stability. Reference to stability and its desirability is stated in the IMF Agreement as it permits fluctuations of exchange rates within an agreed percentage of parity (IV-2). Exchange rate stability has also been favored by a number of economists. As one example, J. M. Keynes held that ". . . it is this distance, which protects the money market of one country from being upset by every puff of wind which blows in the money markets of other countries."[1] Of course, rigid exchange rates can only be maintained if the national price and wage policies of the different countries "were sufficiently integrated to reduce divergent price trends to minor proportions." But rigid exchange rates are obviously different from relatively stable rates. Moreover, ". . . actual disequilibria in the exchange markets are not exclusively related to

---

[1]John M. Keynes, A Treatise on Money (New York: Harcourt, Brace and Co., 1930), p. 325.

disturbances in the international cost and price pattern."[1]

7) Last but not least, the arguments in favor of flexible exchange rates are partly based upon a reliance on "constructive speculation," and this is something of which one can not always be sure. Depending on whether or not it is thought that exchange rates are short and temporary, the nature of speculation would vary, as expectations about future price movements would also vary.[2]

What evaluation can be made with respect to the two sides of the argument? As mentioned in an earlier footnote, the advocates of a flexible exchange rate system form an impressive group. They all agree on the following two assertions:

a) Under a flexible exchange rate system the rate of exchange adjusts so as to keep demand equal to supply without any or only minimal sales and purchases of foreign exchange by officials.

b) This automatic adjustment occurs without traumatic disturbances in domestic commerce, prices, and income policies. Thus a flexible exchange rate system would add, according to the advocates of this system, to the gold-exchange standard the advantage of divorcing domestic policy from direct influence of the balance of payments

---

[1]Triffin, op. cit., p. 82.

[2]Snider, op. cit., pp. 184-187.

and reduce the need for depleting gold reserves.

Under the present system exchange rates may vary within one per cent on each side of the par value of each currency belonging to a Fund's member without the Fund's consent (and by more than that with the Fund's approval). In practice, however, many countries do not allow their exchange rates to vary to the full amount of one per cent on either side of the par but usually keep the spot rate within three-quarters of one per cent of par value.

Apart from the two assertions mentioned above on which supporters of flexible exchange rate generally agree, the range of agreement among advocates of flexible exchange rate varies. Two proposals made by such advocates deserve special attention. They will be referred to as the "Band Proposal," and "Bloc Flexibility." The former refers to flexible exchange rates within wider limits than the present one per cent on each side of the par; the latter involves fixed exchange rates <u>within</u> a group of countries but flexible rates <u>between</u> groups of countries in the world. The latter is, in fact, a combination of flexible and fixed exchange rates based on geographical divisions--geographical lines being determined by historical as well as economic criteria.

<u>Band Proposal</u>. The idea of the band proposal simply tries to widen the range within which the rates of exchange can fluctuate. The whole philosophy behind it is

that if the present one per cent change around the par were to be widened, the need to utilize reserves of gold might be eliminated. Thus exchange rates would, in actuality, make part of the adjustment needed for the functioning of the present international monetary system. The band proposal is not completely new as it parallels a widening of the gold export-import points under the gold standard.

A number of economists such as George Halm, Peter B. Kenn, and Philip Bell have suggested a widening of the existing two per cent band under the IMF system in their testimony before the U.S. Joint Economic Committee.[1] Other economists, e.g., James Meade, whose proposal is discussed in the following chapter, have also written on this view. Even the U.S. Congress, although not recommending the adoption of a band proposal, has specified that the administration should undertake to consider carefully the advantages and disadvantages of a band proposal.[2]

Admittedly, the band proposal may be looked upon as a compromise between those who desire to continue with the present relative fixed rates and advocates of flexible rates. It offers a substitute for the adjustable peg,

---

[1] Outlook for the United States Balance of Payments, op. cit., pp. 127, 143, and 181.

[2] See "A Semi-Official View on Reform" in Chapter V below.

within the limits accepted, without completely giving up the center of the band, namely, the concept of the peg.

In addition to the gain in balance of payments adjustments and the reduction of the need to use reserves, advocates of the band proposal tend to think that the status quo can be maintained with minor amendments without introducing radical change or perfectly new schemes. To put the band proposal into practical operation, each central bank would undertake to allow its money to fluctuate within the band, e.g., within 5 to 7 per cent around the par value, and it would further support its currency within this range. Band advocates also add to their argument that as the world becomes more integrated, the band could be theoretically narrowed and eventually eliminated.

The band proposal is not as radical as complete rate flexibility; it recognizes the significance of a "peg." On the surface this plan appears interesting. Yet, what its actual effects would be on the volume of international trade and investment remains an open issue; perhaps some econometric study should be conducted to measure quantitatively the effects of a band proposal on trade and investment. Moreover, opponents refer to the fact that the wider the range of the band, the riskier the involvements in international trade and investments.

Bloc Flexibility. The idea of bloc flexibility, or what is sometimes referred to as "currency groupings,"

is based on currency blocs which would include countries with close cultural, trade and capital ties. The basic theory resembles a customs union in that there is a fixed exchange rate within a relatively homogeneous group of countries accompanied by flexible exchange rates among heterogeneous groups. Advocates of this system claimed it would provide an optimum means of maximizing economic welfare and reducing problems of balance of payments.[1] Some have gone one step further by trying to derive operational criteria in order to set the limits of the currency blocs.[2]

Advocates of currency groupings argue that the problem of risk introduction in international trade and investments would be magnified as a fixed rate of exchange will be established between countries in one currency bloc. Furthermore, the participant countries would not be hampered by barriers and difficulties on their economic policy coordinations. Yet balance of payments problems between blocs could not disturb the functioning of the international monetary system since a flexible rate would be accepted between currency blocs. In short, what exists is a mixture of fixed and flexible exchange rates based,

---

[1]R. A. Mundell, "A Theory of Optimum Currency Areas," American Economic Review, vol. 51, September 1961, pp. 657-665.

[2]McKinnon, "Optimum World Monetary Arrangements and the Dual Currency System," in Banca Nazionale del Lavoro, Quarterly Review, December 1963, pp. 376-96.

however, on foreign trade ties rather than on national boundaries.

The arguments in favor of a flexible exchange rate system in the above form resemble the proposals for financial integration developed by other economists.[1] If the idea of bloc flexibility were accepted, theoretically at least three "blocs" or "areas" would likely evolve under present world circumstances. The western hemisphere is likely to remain tied to the dollar. The Common Market countries could become one currency area in Continental Europe. The outcome for England is not so clear as it depends on whether Britain were accepted in the Common Market or not. Assuming that Great Britain were not accepted to the Market, the British might remain in their own sterling area, join the dollar, or even, at a later point, be forced to join the European Currency area.

This argument has more appeal to the policy makers than a complete flexible exchange rate, as it approaches the reality of the world closer.

> In the years following World War II problems of imbalance in international payments were widespread and exchange control was rampant and discriminatory. Imbalances in one country's accounts provoked imbalances in those of others. Thus, some Latin American countries experienced payment difficulties not because their over-all accounts were in deficit but because their deficits were with the U.S. and

---

[1]See footnote 1 on p. 55 above.

> needed to be met in dollars, and their surpluses were in currencies which the debtor country would not convert.[1]

The proposal also has an advantage in that, if accepted, it can reduce or prevent the unpleasant and distasteful policy actions that a deficit country may have to accept under pressure of circumstances. The basic flaw in the argument, however, is that the system is not perfectly flexible but realizes the need for the reduction of risk elements through a pegged rate. Whether one likes a flexible exchange rate even between "currency areas" rather than between all countries remains an open issue; most practical economists prefer not to discuss it because of the disadvantages that a flexible exchange rate would have in general.

Thus flexible exchange rates systems despite their theoretical virtues do not appeal to the IMF, central bankers, businessmen, and, in short, to practical people. The reception that flexible exchange rate proposals have received can best be described as cool. Furthermore, proposals for reform of the international monetary system which have centered around flexibility of exchange rates have been practically dismissed as irrelevant in many international discussions. There is, moreover, much that

---

[1]Herbert B. Wooley, Measuring Transactions Between World Areas (New York: National Bureau of Economic Research, 1966), p. 79.

remains debatable about how a flexible exchange rate system would operate in practice. Thus an attempt must be made to find out why this system has faced such a cool reception.

Apart from the basic economic disadvantages of a flexible exchange rate, there are a number of practical problems and operational complexities that are attached to such a system which would undoubtedly reduce its acceptability.

First, the implications of the acceptance of a flexible exchange rate system is to allow different currencies to fluctuate vis-á-vis each other, theoretically, without limits. This would not only introduce elements of risk and uncertainty in some international transactions which might retard trade and capital movements but also would make the calculation of the cheapest way of making international payments a complicated or unacceptable procedure. Suppose, for example, that a flexible rate system is accepted by five countries: Japan, the U.S., France, England, and Iraq. If the currency of each of these countries be designated by yen, dollars, franc, pound, and dinar, as they are in practice, then there would be a $/pound, a $/franc, a $/yen, a $/dinar rate in New York; a franc/pound, a franc/$, a franc/yen, a franc/dinar in Paris; a pound/$, a pound/franc, a pound/yen, a pound/dinar in London; a yen/$, a yen/pound, a yen/franc, a yen/dinar in Tokyo; a dinar/$, a dinar/pound, a dinar/franc, a

dinar/yen in Baghdad with which to contend. In addition, since the system involves a flexible rate, a trader or speculator in each of the above countries would have to take into account that the prevailing rates in his home country money centers do not necessarily hold in the money centers of the other countries. Moreover, for each currency "spot" rate, there could, and probably would, be one or more "forward" rates which must also be taken into account. With a cross-connection of the currencies like that of the above example, and with the possibility of each or all rates fluctuating against each other, the task of dealings in foreign exchange would become enormously complex and perhaps impractical. Of course, if the assumption of only five countries were relaxed and more countries be introduced the complexity of calculations would undoubtedly become magnified. Under the present system such a complexity does exist, but since the rates can change only within one per cent of the par on each side, the loss or gain produced by miscalculation is limited. This, of course, would not be the case if a flexible exchange rate were accepted. Moreover, in current world transactions, because the dollar and the pound with a relatively fixed value are used as key currencies, each country uses their value as a unit of account; therefore, a convenient device is provided for hedging at a lower cost.

Second, should a system of flexible exchange rates be accepted and should the central bank officials engage in operations to smooth exchange rate movements, there is always a chance that the policies of two countries may either cancel each other out, or compound the amount of intervention. If this becomes the case, the advantage of "free forces of the market" that a flexible exchange rate is to provide over the present system would be doubtful.

Third, the scope of a country's involvement in a flexible exchange rate system is not only a function of its relative magnitude in international transactions but also can be affected by non-economic factors. For instance, pride and prestige might dictate that the United Kingdom and the United States have monies that would not depreciate vis-á-vis the currencies of others. Moreover, the impact of a flexible exchange rate system on a country depends on the degree to which the country in question depends on international trade for its economic welfare. The very fact that businessmen <u>think</u> a flexible exchange rate exists may introduce substantial additional risk and may disrupt their business decisions.

Fourth, the very existence of the idea of scarcity of international reserves in the present system poses monetary disciplines on some countries that may not therefore allow inflationary domestic monetary policies. If the situation were to be relaxed under a flexible system,

these countries might feel free to pursue high employment and rapid growth policies without consideration for the effect of such policies on their domestic prices. As inflation spirals domestically, the external value of the currency spirals downward. This would mean that the price of imported goods or raw materials may be higher for the importing countries. Furthermore, if the prospect of depreciation becomes continuous, it might cause capital flight and compound the instability of rates. For such reasons, advocates of flexible exchange rates have sometimes proposed that "limits" be set on the flexibility of the exchange rate.

Fifth, it is argued that an inefficient and costly reallocation of resources will be induced if a flexible exchange rate exists. For example, over the course of a business cycle, should the domestic currency depreciate in an expansion, the profitability of industries producing for the internal economy would be expected to change vis-á-vis import and export competing industries, and factors of production would have a tendency to move toward the profitable industries. A significant appreciation in a recession would reverse the process; hence reallocation of resources may be subject to short term movements, and if the incentive for movement suddenly reverses itself two or more costly movements may need to be made, thus making the

resource reallocations costlier than they would be had they not been subject to short term incentives.

Finally, in today's world external and internal economic matters are so closely interrelated and so intricately entwined that even the acceptance of a flexible exchange rate can not insulate domestic economy from happenings abroad--exogenous factors over which no nation has control. Thus under any international financial arrangement international cooperation is needed, and the arguments for a flexible exchange rate system underscore this need. Opponents of flexible exchange rate usually refer to one or more of the above arguments to show that the probability of success of this system is nil and that flexible exchange rates can be quite an unstable system.

In the light of the above lines of reasoning, one can safely assert that benefits are to be derived from relatively stable exchange rates--or from avoidance of competitive exchange depreciation. The establishment of the IMF has facilitated international trade and investment, and, as time passes, even some of the most ardent supporters of flexible exchange rates can observe the advantages of providing relative confidence in international economic relations on world money.

Increasing International Understanding and Cooperation

A third group of plans has been designated as international cooperation and can be broken down into mutual assistance among central banks, centralization of monetary reserves, strengthening the IMF, and creation of an international bank for the settlement and clearing of the international transactions. More hope can be placed on this category in terms of eventual agreement because the range of agreement among the supporters of this category of proposals is not very limited despite technical differences. Part of the reason for this assertion lies in the fact that many economists, for reasons discussed in the previous sections, are against either an upward valuation of the price of gold or the acceptance of flexible exchange rates. Therefore, they are automatically led to alternative types of suggestions which would bring about the desired reform. Sir Roy Harrod is an example in this respect. His favorite plan, known as the Harrod Plan, is based on the idea of an upward valuation of the price of gold; he supports this with full conviction. Nevertheless, realizing the hesitation of practical men, he has proposed alternative plans called A, B, C, and D, all of which aim at providing countries so adequately with reserves that their permanent concern over restraints on the goals of the national economy and about the maintenance of equilibrium in their balance of payments would be relieved. As

late as March 1967, in response to a question he has raised: "How quickly a nation that finds itself in deficit should feel obliged to cure that deficit," he answers:

> If it is considered that immediate steps should be taken, then we could all get along with modest reserves. But if it is considered preferable to re-adjust at a more moderate pace, then larger reserves are needed. . . .[1]

Supporters of this category of proposals have enumerated the following advantages:

1) There will be some arrangements to clear and settle international transactions and claims without resort to blocked balances, bilateral clearings, unilateral action and competitive exchange depreciation.

2) As a result of these, there can be an orderly conduct of production, trade, and distribution on an international scale.

3) There will be a means of reassurance to a troubled world whereby each country would be relieved of anxiety created by causes which are not of its own making. Furthermore, economic authorities of many countries would be able to focus their attention mostly on national economic objectives without undue worry about adequacy of international reserves. If hot money movements are the cause of trouble for monetary authorities of a country, with international

---

[1]Sir Roy Harrod, "World Reserves and International Liquidity," in Council of the Economic Society of South Africa, The South African Journal of Economics, Vol. 35, No. 2 (June 1967), p. 93.

cooperation of central banks, "the outflow of speculative funds need not be associated with a reduction in effective demand for goods and services."[1] Acceptance of some international agreement on the world monetary system would also make unnecessary those methods of discrimination and/or restrictions that some countries have adopted defensively. 4) Defenders of this category of reform proposals have further held that countries--especially the ten industrialized ones--have had to resort, from time to time, to international cooperation and this has led at least to preventing crisis or chaos in the present international monetary system. One striking example is the General Arrangements to Borrow (GAB) which was concluded in Paris, in December, 1961, between the ten leading industrial countries and the Fund, whereby participating countries stand ready to loan their currencies to the Fund whenever they and the Fund agree that additional reserves are needed for the support of the international monetary system. Needless to say, GAB was initiated, at least partially, because of serious deterioration in the U.K. balance of payments position which was caused by speculative movements induced by the prospects of possible further changes in the value of the Netherlands guilder and the German mark.

---

[1]Machlup, "Plans for Reform of . . .," op. cit., p. 39.

Since such arrangements, by and large, have proved to be useful--at least in terms of preventing a serious monetary crisis--the question is raised: why not initiate a more ambitious plan of the central banks in order to accept arrangements whereby the international monetary problem is solved once and for all, at least for the foreseeable future?

One rather lengthy example can show how helpful cooperation among central bankers has proved to be; it illustrates what chaos or vulnerability would have been created had they not reached an agreement to act immediately. Edwine L. Dale, Jr., New York Times correspondent, reported in the November 29, 1964 issue[1] that

> bankers, traders, and others in many countries began selling more pounds--and more than $5 billion worth of pounds are held by private individuals and businesses outside Britain . . . (this because of the British balance of payments deficit, the October election of a Labor government, and 'justly or not,' the world's financial distrust of the Labor party in Britain generated by fear that measures Labor would favor might make Britain less competitive than ever and thus make her deficit worse).[2]

The report goes on to say that

> In the last three weeks, Britain was spending her reserves so fast to support the pound (because of a run on the world's second most important bank--that of Britain) that the danger of devaluation--or forced

---

[1]Reprinted in Smith and Teigen, Readings in Money, National Income, and Stabilization Policy, op. cit., pp. 480-484.

[2]Ibid., p. 483.

> devaluation--began to seem real. And so the run got all the worse.[1]

Among the measures that the British government accepted was an emergency increase from 5 to 7 per cent in the Bank of England's lending rate which, incidentally under the British system, determines nearly all other interest rates in the economy. Within eight hours of the British announcement, the Federal Reserve acted by increasing the U.S. counterpart of the bank rate from 3½ to 4 per cent and permitted the payment of higher rates on savings deposits.[2] The increase of interest rate in the Bank of England "stopped the run on the pound for 24 hours." To the astonishment of the British Central Bank authorities, however, "the run resumed at midday Tuesday."[3] It resumed, according to Dale, simply because of a "report in Europe that Britain had run out of borrowing facilities from other central banks and that her reserves had sunk dangerously low . . . and that devaluation was still possible." After telephone calls between central bankers of Europe, Canada, Japan, Britain, and England, these men resorted to what might be called a rescue operation by putting

---

[1] Ibid., p. 483.

[2] Ibid., p. 484; Students of money and banking know that under the United States monetary system, an increase in the discount rate does not automatically mean higher rates charged to borrowers of business loans, mortgages, installment credit, etc.

[3] Ibid.

together "a massive package of $3 billion in commitments from the Federal Reserve and ten other central banks to lend reserves to Britain if needed." One hour after the package was announced, the run on the pound had stopped.[1] Vulnerability of the system can clearly be seen in the monetary disorder that would have occurred had the central bankers not decided to resort to a rescue operation--the very same potential danger that Triffin has repeatedly emphasized by objecting to the use of national currencies as international money.

5) Supporters of international cooperation further assert that assistance by foreign or international institutions can eliminate the anxiety of losing gold and monetary reserves or the international prestige of key currencies. Furthermore, the system would be reinforced through international cooperation against the onslaught of hot-money movements. In addition to the above, pressures on monetary authorities of countries who suffer from capital outflows would be reduced. Needless to add, the pace of development and growth in underdeveloped countries could thus be made to be more smooth.

6) In a domestic economy, a central bank can extend the volume of money and credits if and when it is needed.

---

[1] Ibid.; for preparation of this example heavy reliance is placed upon Dale's article referred to in the previous footnote.

This potential advantage of a central bank can prevent money crises which may occur in the absence of an effective central banking system.[1] Supporters of the establishment of a world central bank also claim--and rightly so--that it can multiply the capacity of the world monetary system to create credits by temporarily transferring international reserves from one central bank to another and thus make individual central banks shock-proof. Moreover, arrangements can be made, so the argument goes, whereby assistance among central bankers or the supervision of an international institution, such as the World Bank or an expanded IMF, not be limited to emergency situations; thus the institution would function on a daily basis. Part of the trouble in the present international monetary system arising from the role of gold and its annual rate of growth can be coped with without exposing the system to the danger of collapse.

Obviously, this group of proposals varies in the degree of details, technicalities, accurateness, and even types of provisions made. Reference to the Triffin and

---

[1]Many crises can be found throughout the history of different industrialized countries, whose causes have been basically the lack of an effective monetary system. For example, in the U.S. the panics of 1873, 1884, 1893, . . . and 1907 ". . . were accentuated by . . . peculiarity of the national banking system." See Gilbert C. Fite and Jim E. Reese, An Economic History of the United States (Cambridge, Massachusetts: Houghton Mifflin Company, 1959), p. 474.

Maxwell Stamp Plans which respectively call for the extension of the IMF into an international reserve bank and extending the IMF into an institution creating reserves internationally are sufficient to demonstrate this. More recent examples are the differences between the stand-by credits under the Bernstein Plan or under the Jacobson arrangements. "Among economists," says Machlup, "there are many who regard these proposals as premature but certain of eventual acceptance. A few economists go so far as to regard them as the only real solution."[1]

Against such advantages, of course, there have been a number of questions, objections, and/or criticisms to centralization of world reserves, to the establishment of a world central bank, and to the types of arrangements necessary for the expansion of the IMF. These can be summarized as follows:

1) A lending bank, or institution, may lend foreign exchange, possibly gold or its own currency. And what it receives for its portfolio may also vary since it may be in any of the following forms: medium or long term obligations of the borrowing country, payable in gold or currency of another country, currency of the country in need of help, etc.[2] These are, of course, open issues which

---

[1]Machlup, "Plans for Reform of . . .," op. cit., p. 40.

[2]For further information see Machlup, op. cit., p. 31.

have to be taken into account in the establishment of an international central bank. Needless to say, it is not easy for academic economists to agree on any practical solutions of the problems under debate.[1]

2) As far back as 1943, Keynes mentioned, in his proposal for an international clearing union,

> It may be doubted whether a comprehensive scheme will ever in fact be worked out, unless it can come into existence through a single act of creation made possible by the unity of purpose and energy of hope for better things to come.[2]

3) One can not ensure that drawing on the IMF--or the operation of any other international institution--would be of just the right magnitude to create the optimal supply of monetary reserves, to help troubled countries adjust their balance of payments disequilibrium, or to prevent inflationary or deflationary tendencies in the world economy.

4) There are other problems and disagreements in regard to the type of guarantee to be given to participating countries, the manner in which they should be stimulated to participate, the pattern and the magnitude of change in the present international monetary system, the political and international implications of different proposals,

---

[1]Robert Triffin, The World Money Maze (New Haven: Yale University Press, 1966), p. 317.

[2]The Keynes Plan reprinted in George Halm, International Monetary Cooperation (Chapel Hill: The University of North Carolina Press, 1945), p. 228.

the different responses and reactions of countries, their attitude as to how serious they think the problem at hand is, how urgently it should be attacked, how much hope can be placed on practical solution of the problem, who should initiate and/or lead international negotiations and how conditions of membership, provisions for the functioning of the international agency should be established. In short, a large group of other relevant factors would have to be taken into account.

Such problems, however, should not discourage practical men. Academicians and practitioners should not despair even with the bombardment of suggestions developed. There is reason to believe, in the light of advances already made in the form of GAB and the like that

> the lines of development pursued in the postwar period offer the best chance for further progress. The international financial machinery has proved to be flexible and adaptable. Within its terms of reference or with relatively small changes in them . . . This machinery is capable of further growth and adjustment.[1]

There is a definite need for courage, patience, and willingness to be practical--without trying to stick too much to theoretical considerations. As will be seen in a later chapter, it is only in this third category of proposals that one can dare place the most hope for a practical

---

[1]Oscar L. Altman, "Professor Triffin on International Liquidity and the Role of the Fund," IMF Staff Papers, Vol. 8, May 1961, Washington, D. C., p. 188.

solution of the problems of the international monetary system.

One should also bear in mind that this third category of proposals overlaps with the first category and relates to it in that those who support more international cooperation favor proposals which range from the case for reviving the gold standard and strengthening its position by some type of innovation (such as the Fund Unit in Roosa's plan) to the belief that no change at all is in order or even to the complete condemnation of gold (as in Lerner's plan, all to be analyzed in detail in the next chapters). Therefore, any classification of proposals involves some degree of arbitrariness, and there is no distinct and clear line to be drawn between each category.

CHAPTER IV

REVIEW OF INDIVIDUAL PLANS

The previous chapter attempted to examine the substance of proposals for reform and the possible forms of change without regarding the individual advocates or opponents of each system. This chapter supplements the previous one with a review of individual plans suggested in the 1960's. The same classification used in the previous chapter will be used. It must be added, however, that most of the plans suggested in the 1960's have focused their attention on the creation of international reserves and/or an international or supra-national bank, and very few have talked about gold or flexible exchange rate systems.

For the purpose of analytical classification then, all plans can be placed in one of the following categories:

1) proposals related to gold, 2) proposals related to a flexible exchange rate system, 3) and proposals concerned with international understanding and cooperation. The group related to gold can, in turn, be broken down into three subcategories:

a) Those who are against adherence to gold assert that since on a domestic basis we have managed in some

countries to control the volume of money according to economic needs, there is no reason for adherence to gold on an international basis. A. Lerner is one example in this subcategory; his slogan is: "Let us Get Rid of our Cross of Gold." In his estimation adherence to and the use of gold cannot by itself provide the international economy with enough liquidity.

b) Contrasting with this viewpoint is that of those economists who believe that the root of all the present disturbances in the international monetary system is a departure from the pure gold standard and its rules. Jack Rueff, the French economist, is a striking example of this school. He holds that the best way to cure the imbalances of the international monetary system is a return to a gold standard system, thus eliminating the exchange standard which has been added to it.

c) Between these two extremes one can find more moderate attitudes with respect to gold: that is, those who neither completely oppose the gold standard nor favor its full implementation. The IMF lies within this subcategory in that it asserts that a relatively fixed price of gold has provided some monetary discipline; that gold must be respected in order not to create monetary chaos by shaking international confidence; that gold has not provided the international economy with adequate liquidity, yet should not be rejected on this basis; and that

supplements, such as more international reserves, must be provided in order to maintain the desired degree of international liquidity.

2) Proposals related to a flexible exchange rate system suggest basically that acceptance of this system can bring the desired adjustments in terms of the rates of exchange in different countries, hence reducing or eliminating the need for reserves. James Meade is one example in this category.

3) Finally, many economists in recent years have focused their attention on increasing international understanding and cooperation. The plans of Bernstein, Roosa, Hansen, Zolotas, Maulding, Stamp, and Angell would fall under this category. Needless to say, the degree of their respect for the present institutions of the international monetary system varies (and review of their individual plans will attempt to evaluate this among other things).

It must also be pointed out that any classification is bound to have elements of arbitrariness. For example, the classification established here overlaps in this third category of proposals with the third subcategory of the previous category. Therefore, a separate treatment of subcategory c in the previous category will be eliminated to avoid repetition. Lutz's proposal may be classified under the multiple-exchange standard category and plans requiring mere extensions of the present system. Yet, the analysis

has to follow some order. Accordingly, the order presented above will be used in review of the plans.

Proposals Concerned With Gold

Lerner's Plan

Abba Lerner sees as the root of illness of the present international monetary system the belief in gold. The substance of his proposal advocates the abandonment of gold and admission of a dollar or dollar-sterling standard. Speaking of the U.S. loss of gold, he has the following to say:

> The $9 billion decline in the U.S. gold stock since 1948 is the least damaging result of our balance of payments problem. Indeed, it is a good thing for us to get useful goods and services in exchange for an idle stock of yellow metal. The evil is that in our hysteria over the gold outflow, we have resorted to damaging restrictionist policies, giving the lie to our declared devotion to freedom of trade.[1]

Lerner admits that gold was once an unquestioned standard of value for excellent reasons,[2] but he believes gold is now no longer suitable as a basis for the world's monetary supply. He cites two reasons for this. First, the increase in the supply of world gold has not been sufficient to keep pace with the needs for international

---

[1]Abba P. Lerner, "Let's Get Rid of Our Cross of Gold," Challenge, the Magazine of Economic Affairs, Vol. 12 (Institute of Economic Affairs, April, 1964), p. 22.

[2]See above, pp. 15-16.

money;[1] second, the tremendous role of the U.S. economy in the world trade is such that Lerner believes "gold is valuable because it can be exchanged for dollars rather than the other way around."[2] Lerner further specifies that an increase in the price of gold--a solution that some economists have suggested to cope with the problem of international liquidity--would mean a devaluation of the dollar in terms of gold, and in his opinion, the U.S., for a variety of subjective and objective reasons, is unwilling to accept such a devaluation.

The idea of "our gold hysteria over the gold outflow" is repeatedly mentioned in his article in different forms, and apparently his intention is to emphasize that one solution is to give up this attitude: "we could sell our gold gradually, or we might simply stop trying to check our gold outflow and thank the buyers for giving us useful goods in exchange for our gold." The implication of this line of reasoning is obviously that gold is not, to say the least, as useful as it is commonly thought to be. It has been shown previously that people have sought for good reason to own gold,[3] and such demand for gold is

---

[1] An assertion which could be supported by available statistical data, see above, p. 19; Ibid., p. 23.

[2] Ibid., p. 23.

[3] See above, pp. 15-16.

not simply a matter of "hysteria" as Lerner tends to maintain. In any case, he admits that "international confidence in gold would necessarily be shaken by the policy which I have outlined. . . ." Whether one needs to disturb the international confidence in attempting to reform an already somewhat unstable system remains an open issue, and certainly the alternatives which would not necessarily disturb this confidence should not be neglected.

In addition to abandoning gold, Lerner suggests that "we could increase the general acceptability of the dollar for international liquid reserves by combating inflation more energetically," and the final result of his proposed plan, as he sees it, would be "the establishment of an automatic dollar (or dollar-sterling) standard, working just like an ideal gold standard."[1]

Details of his plan, of course, need to be spelled out and a great many questions have to be answered before adoption of such program could be seriously considered; to this Lerner readily agrees. Perhaps he thinks it is too early to spell out the details of his plan before its principles have become acceptable.

---

[1]An ideal gold standard is, in his words, "one in which the supply of gold is never too scarce or too plentiful, but increases sufficiently whenever a scarcity of gold tends to raise its value, and decreases sufficiently whenever a scarcity of gold tends to lower its value, so as to keep its value stable." Ibid., p. 23.

Rueff's Plan

Jacques Rueff introduces his plan with the assertion that every day the economy of the West more resembles the situation that turned the 1929 recession into the Great Depression and that the ingredients of another 1929 are in the making. In his words, "the instability in our monetary system is such that a minor international incident or a small economic or financial disturbance could set off worldwide disaster."[1]

Fortune has summarized Rueff's prescription as: "Get rid of the gold-exchange standard." In Rueff's opinion, the proposals suggested for the reform of international monetary system do not go "to the roots of what is wrong" but "prolong for several months or years the erring ways that are responsible for the danger."[2] Rueff asserts that during the decade 1951-1960 while the U.S. was piling up a balance of payments deficit totaling $18.1 billion (according to the figure he cites[3]), some $13 billion accumulated in the hands of people outside the continental U.S. money markets in the form of night deposits or short-term investments. This, in his opinion, constitutes a

---

[1]Jacques Rueff, "The West Is Risking a Credit Collapse," Fortune, vol. 64, July 1961, p. 126. Evaluation of Rueff's position in this section is based on his article in the above mentioned volume of Fortune.

[2]Ibid.

[3]Ibid.

claim on the U.S. gold reserve that "could be called at any time--with catastrophic consequences." There is, of course, no doubt that dollars in foreign hands constitute a claim upon the U.S. gold reserves. But whether one should--as Rueff does--derive from this premise the conclusion that such claims, if called, could bring about "catastrophic consequences" is doubtful for the following reasons.

1. The U.S. has some short-term claims against other countries which could be used as a bargaining power.

2. The U.S. has significant drawing rights on the IMF which might be used to reduce pressures on the dollar. The U.S. could, by drawing on the IMF, acquire the foreign currencies that might be needed and then could exchange these foreign currencies for dollars with the objective of reducing or eliminating short-term claims against U.S. dollars.

3. Nowadays the range of international cooperation is greater than a decade ago. There now exist the General Arrangements to Borrow, standby credits, currency swap transactions, as well as the sale of Roosa bonds or some other such securities which could be used to protect U.S. dollars. The institution of further similar arrangements is also a possibility.

4. Even if the U.S. were to lose all of its gold, although the public's confidence might be temporarily

shaken, and despite the probable undesirable consequences of this loss, one cannot necessarily expect "catastrophic consequences" as the dollar's economic strength in terms of the volume of domestic production would remain.

5. The U.S. also has direct and portfolio investments which form claims for the U.S. against other countries.

In regard to the historical background of the gold-exchange standard Rueff believes:

> Back in 1922, long before the U.S. went off the gold standard, the International Economic Conference in Genoa passed its famous Resolution 9, which recommended . . . some means of economizing the use of gold by maintaining reserves in the form of foreign balances.[1]

Furthermore, the gold exchange standard, according to Rueff, "was neither created nor even expressly desired, by the U.S." Again Rueff's assertion in this respect is not perfectly plausible. Even if one accepts that the Genoa Conference gave the gold-exchange standard official recognition, one must remember that the U.S. dollar had been widely used before the Conference. There are two conditions which must be met before a country's currency could be used as international money. Such a country must be economically strong and maintain significant trade relations with other countries. Moreover, the country must provide banking facilities to give foreigners ready access

---

[1] Ibid., p. 126.

to its currency. By 1922 the U.S. was already enjoying these conditions, and despite Rueff's assertion, it was not the International Conference of 1922 which gave this role to the U.S. dollar.

To the question of what the consequences of the U.S. deficit have been Rueff answers that the "losers get their marbles back"; more specifically, "the American balance of payments deficits were allowed to persist for the 1951-1960 period only because the U.S. was not really required to settle its debts abroad."[1] Thus, in his estimation, the built-in stabilizer is removed in the sense that had there been a gold standard, a deficit country would have had to lose gold; Rueff claims this loss would "tend to counteract the deficit, by releasing a greater part of the national product for exports and inhibiting imports;"[2] however, Rueff specifically suggests that in the present system "the dollars that go abroad as a result of U.S. balance of payments deficits return to the U.S. as sight deposits or short term investment." Of course, Rueff is unwilling, on nationalistic grounds, to admit that it is the larger size of capital markets in the U.S. than in Europe that invites dollars back as sight deposits, or that expectations of liquid investments cause them to be invested in the U.S. as short term investment.

---

[1] Ibid., p. 126.

[2] Ibid., p. 127.

Without questioning the validity of the argument that a gold standard system can provide monetary discipline, Rueff needs to be reminded that in the short run disequilibria in balance of payments, whether in the form of surplus or deficit, is inevitable in a world in which goods and money can move from one country to others. And in the long run--which seems to be a more appropriate period for discussing the U.S. deficit--other factors such as the cost of international commitments, foreign aid, and grants all affect the balance of payments deficit. Therefore, that America allowed a balance of payments deficit to persist for the 1951-1960 period "only because the U.S. was not really required to settle its debts abroad," as quoted above, is not a well-founded argument.

The process of double pyramid of credit, with which Rueff does not agree, works this way:

> When the U.S. has an unfavorable balance with another country (let us take as an example France), it settles up in dollars. The Frenchmen who receive these dollars sell them to the central bank, the Banque de France, in effect, creates these francs against the dollars. But then it turns around and invests the dollars back in the U.S. Thus the very same dollars expand the credit system of France, while still underpinning the credit system in the U.S.[1]

Interestingly enough, Rueff derives, from the above quotation, the conclusion that this process becomes "a powerful instrument of worldwide inflation" when there are large international movements of capital from countries with key

---

[1] Ibid., p. 262.

currencies. To demonstrate his point further, Rueff asserts that this process was "tragically illustrated by the events that led up to and followed the 1929 depression." On this point it is sufficient to say that one can hardly believe the Great Depression was the result of any one factor. Moreover, the conclusion that the process of double pyramid of credit necessarily becomes a powerful instrument of world-wide inflation is not economically justified in view of the fiscal and monetary controls that countries can use to curb the undesirable effects of their own or others' deficits.

In addition to the first two consequences of the gold exchange standard already discussed--the removal of the built-in stabilizer, and the double pyramid of credit--Rueff refers to a danger of collapse which in his opinion is the most serious consequence of the gold exchange standard. This he expresses as a double commitment of the U.S. gold reserves as pledged reserves that must under law (which can of course always be changed) be maintained as a backing for Federal Reserve currency and also as a guarantee against short term or sight assets held in the form of dollars by foreigners. Thus the "double mortgage" put on the U.S. gold stock is an unacceptable feature of the gold-exchange standard to the French economist, Rueff, and he thinks this is a real cause for concern. Needless to say the real cause for concern in the international

monetary system is not so much the matter of gold holding of individual countries as it is of a long run appropriate and adequate rate of growth of world liquidity to fulfill growing needs.

What does Rueff recommend in the way of reform? His thesis is a return to the "gold standard." Referring to the Genoa Conference of 1922 Rueff indicates "what one international conference did, only another international conference can undo."[1] He believes, and rightly so, that whether in panic or in cool consideration, "the problem of the gold exchange standard will inevitably be resolved" but it is essential that the "undoing" occur without delay.

How should the danger be coped with? Rueff asserts first that a system must be introduced which "does not tend to favor prolonged balance of payment deficits in countries with key currencies"; second "we must liquidate the unstable and dangerously vulnerable situation resulting from the duplication of the credit structure built on the gold reserves of those countries with key currencies." Furthermore, the system must make it impossible for creditor nations to generate new internal purchasing power on their foreign balances. According to Rueff, a gold standard "takes care of this by requiring central banks to issue money only against gold or national credit."

---

[1] Ibid., p. 268.

Rueff himself does recognize that the depletion of U.S. gold reserves is less serious than it looks because reserve requirements are subject to law and can be changed. He also recognizes that elimination of dollar holdings from the international reserves reduces the available supply of international liquidity; in this he clearly specifies that "such a consequence can not be permitted."[1] Yet when he has to suggest a proposal for reform of the system, other than very briefly suggesting a return to a gold standard he does not make himself clear. He does specify that it would be imprudent from simple calculations to estimate how much the price of gold should increase or even to derive the conclusion that an increase in the price of gold is unavoidable. And in this way he implicitly rejects the idea of a change in price of gold. He also refers to Triffin's plan for creation of international money and holds that ". . . in the complex system Professor Triffin imagines, the new international currency would be only partially convertible into gold, and in certain circumstances it might have to be made absolutely unredeemable in gold."[2] But he does not go further in the direction of suggesting how a return to the gold standard should be, or could be, accomplished in today's world.

---

[1] Ibid., p. 267.

[2] Ibid.

Rueff himself recognizes that the liquidation of the gold exchange standard poses difficult questions that demand deep study and discussion. But evidently he does not undertake this study, and the only statement he makes is that "methods of international payment could be improved so that a smaller volume of cash balances would be required to meet the requirements of daily settlements." Precisely how this should be accomplished requires further elaboration which he has not attempted.

Rueff's concern is mostly with the gold standard and abolition of the "exchange" from the present gold-exchange standard. Being an ardent advocate of the pure gold standard, the degree to which he believes in the efficacy of its classical rules of operation is not surprising. Rueff has not gone into a constructive discussion of how his objective--namely, a return to gold standard--can be accomplished. Even if he did, it is doubtful that all countries in the world would want to go back to the gold standard. Furthermore, the reader of Rueff gets the impression that he derives wrong conclusions from the acceptable premises that he presents, as was shown above with examples. A discussion of a return to the gold standard, its appropriateness or inappropriateness, lies outside the scope of this study.

The gold-exchange standard despite its recognized deficiencies has, in the words of Xenophon Zolotas, "proved

to be a workable system calling for neither revolutionary change nor irreversible reformative measures."[1] The same author's belief as quoted below might be considered as an answer to Rueff's ardent advocacy of gold standard.

> Gold is too scarce a reserve asset to be assigned a quantitatively dominant role in international transactions, while the presently existing key currencies have proven to be too useful and important to be demoted instead of reinforced in their key role.[2]

A Proposal Concerned With Flexible Exchange Rate: Meade's Plan

Meade starts his article[3] with a statement of the need for reconsideration of present arrangements for international payments by the highly developed industrialized countries; it is his purpose to suggest some improvements in the machinery for international payments.[4] According to him

> a financial system is only a means to an end; and, in order to decide what principles one wants to adopt for a payments system one must first know what are the basic objectives which one wishes to achieve by means of it.

---

[1]Xenophon Zolotas, Alternative Systems for International Monetary Reform--A Comparative Appraisal (Athens: Bank of Greece Papers and Lectures, No. 18, 1965), p. 17.

[2]Ibid., p. 32.

[3]James Meade, "The Future of International Payments" originally published in Three Banks Review, June 1961, and reprinted in U.S. Congress, Factors Affecting the United States Balance of Payments, op. cit., pp. 239-252.

[4]Ibid., p. 241.

Freer trade, more liberal foreign aid, and a higher rate of domestic economic expansion are his objectives.

Meade cites the examples of the U.S. in the first ten years after the Second World War and of Germany during the 1957-1961 period to show that: 1) U.S. monetary authorities refused to deflate its domestic incomes, prices, and costs--which is the gold standard rule to overcome a deficit in balance of payments--, and that 2) German authorities attributed higher priority to domestic full employment, price stability, and economic growth, and have shown "no signs of willingness to abandon these domestic objectives for a domestic inflation which would remove the surplus on her balance of payment."[1]

A system of international payments "must be such as to enable them to press ahead with the removal of tariffs and other obstacles to imports."[2] Meade supports a policy of "freer use of alterations in the rates of exchange" between national currencies of Western countries, and asserts that these alterations in exchange rate "will look after the balance of payments problem by a double mechanism."

1) The appreciation of the strong currency and the depreciation of the weak currency will make the products of the former country relatively more expensive and the products of the latter country relatively cheaper to all purchasers.

---

[1] Ibid., p. 243.

[2] Ibid., p. 244.

2) Since such adjustments will take time, they "will induce the private speculator to move funds from the former into the latter currency," and this will serve to finance the temporary deficit on the balance of payments of the deficit country until the exchange rate variations have had time to carry out their basic role of adjustment. Such mechanism could work out if: "the products of the countries concerned are competitive with each other," if speculators have a good understanding of what is going to happen, and if they operate at the right time in the right direction.

The substance of Meade's proposal is presented in the following scheme:

1) The IMF would be reformed, and all monetary authorities of the Western countries would get "gold certificates" in exchange for paying all their monetary reserves to the IMF.

2) They should then let the value of their currencies fluctuate in terms of such gold certificates according to supply and demand forces in the foreign exchange market.

3) Having this enormous additional fund of gold and additional currencies, the IMF "could now act as a most important supranational exchange equalization account." If the IMF finds that the pound is temporarily unduly depreciated in terms of dollars, it could buy pounds and sell dollars out of its holdings of these currencies.

4) Gold certificates would be held as the sole form of

reserves, and the IMF could now purchase national currencies for these certificates.

The reformed IMF in Meade's scheme becomes "a real supranational exchange equalization fund" which could give temporary support to one currency in terms of another if such support was desirable. This would relieve monetary authorities of each country from the pressure of concern over the balance of payment, and they could then concentrate, in Meade's opinion, on their domestic policy objectives. He further argues that:

> there is nothing absurd in modern conditions in having an international currency of this kind, controlled by a truly supranatural authority, and at the same time having a number of national currencies whose values may fluctuate in terms of each other and in terms of the international currency.[1]

Meade gives only a short account of how he personally hopes his suggested system would work in practice and readily admits that "such proposals raise, of course, the most far-reaching questions of the proper nature for the management and governing body of an IMF that was transformed into so powerful a supranational instrument . . .," and does not bother to discuss adequately the practical ramifications of his proposal.[2] One point that he rightly mentions, however, is that ". . . all Federal or confederal

---

[1] Ibid., p. 252.

[2] Closely related to this section is the discussion of Band Proposal and Bloc Flexibility in Chapter III above.

arrangements rest upon a sensible division of functions between the 'central' and the 'local' governments, suitable to the practical problems of the real situation."[1]

Proposals Concerned with International Understanding and/or Cooperation

Extension of the Present System: Lutz Plan

Friedrick A. Lutz proposes a plan for creation of a "Multiple Currency Standard." The essence of his plan is that western countries now holding dollars

> should in the future keep their international reserves not exclusively in one country's currency but in many, and that the United States too should follow a policy of holding other countries' currencies in addition to gold.[2]

Before discussing the Lutz plan any further, one should familiarize himself with why he proposes a Multiple-Currency Standard as a solution to the problem of international monetary system.

To begin with one may point out that Lutz does not think the scarcity of international reserves is a "very imminent problem"; nevertheless, in his estimation, "it is the economist's job to think in time about possible solutions for the dilemma. . . ."[3] Furthermore, he thinks

---

[1] Ibid., p. 252.

[2] Friedrick A. Lutz, "The Problems of International Liquidity and the Multiple-Currency Standard," Princeton University, International Finance Section, Essays in International Finance, No. 41 (Princeton, N. J.: Princeton University Press, 1963), p. 9.

[3] Ibid., p. 3.

the U.S. "cannot afford to go on running a deficit indefinitely." He starts his plan with an appraisal of the present international monetary system, and after mentioning the above points, he sets himself the task of thinking in terms of possible solutions.

The first is the adoption of a flexible exchange rate system which is, as he sees it, "a very neat solution inasmuch as it removes the problem of the adequacy of international reserves from the scene."[1] Yet he does recognize very clearly resistance of monetary authorities to a flexible rate system. Then, in spite of the fact that he advocates such a system "at least within certain rather broad limits," because he considers it an impractical solution, he does not discuss it.

A second possible solution is an increase in the price of gold. He abstains from discussing this solution in detail for two reasons. First, as soon as there is serious discussion of an upward valuation of gold in terms of dollars--which, in his opinion, cannot be kept secret under present conditions--a "scramble for gold" and a "confusion in foreign exchange markets will occur."[2] Secondly, there is an "inflationary danger which the large increase in reserves of all countries with substantial gold stocks would entail."

---

[1] Ibid., p. 4.

[2] Ibid., p. 5.

Still a third solution consists in "widening the foreign borrowing potentials" of countries by having surplus countries lend to deficit countries. Here one must credit Lutz with the emphasis that he has put on the "importance of a country's borrowing potential as part of its international liquidity," a point often neglected by some economists as well as statisticians. On this point, without trying to criticize the nature of the statistics compiled, he says:

> We cannot attach much significance to the customary calculation of the international liquidity reserves of the western world which equates them to the sum of the various countries' gold stocks plus the dollar balances of countries other than the United States plus the sterling balances of the outer sterling area. For such a calculation makes no allowance for the borrowing potential of the various countries. . . . There is no way of knowing the sum total of all the borrowing potentials.[1]

Lutz then thinks that the borrowing capacity of a country should be regarded as part of its international reserves. He cites examples to show that the shortage of international reserves can be overcome by international lending and borrowing. He further specifies that plans which have been devised to solve the international monetary problem are variations of this theme of international lending either by inducing or by forcing those in strong foreign exchange positions to lend to those in weak ones.[2]

---

[1] Ibid., p. 9.

[2] Ibid., p. 6.

International lending may or may not, according to Lutz, create international reserves for the lender. Proposals such as the raising of IMF quotas and the granting of standby credits can, so he argues, be regarded as measures which merely provide for an increase in the borrowing capacity of deficit countries. But there are other proposals, such as the Triffin Plan, which go further than this as they provide for lendings that create reserves for the lenders. From this type of distinction Lutz derives the following conclusion:

> Through the IMF the borrowing potential of all participating countries has been increased; and when any country borrows, the corresponding lending by other countries is of the 'neutral' type, which does not create reserves for the lenders. The United States, however, has in addition a borrowing potential which others do not have. It consists in the willingness of other countries to acquire dollar balances; and the acquisition of such balances is representative of the second type of lending, namely, that which creates international reserves for the lender.[1]

On the basis of this line of reasoning Lutz further adds that under the present gold-exchange standard system accumulation of dollar balances may be accompanied by loss of gold by America[2] and "leads in any case to a reduction in the United States ratio of gold to short-term liabilities." As long as the present system exists, there are, in Lutz's opinion, pressures on "countries with strong foreign exchange

---

[1] Ibid., p. 7.

[2] It must be noted that private foreign dollar balances can quickly be changed into official balances, adding to the potential claims against gold.

positions to 'lend more.'"

In order to support his argument further, Lutz has cited some figures. He finds that official dollar and sterling balances held by other countries have been respectively $11.7 and $6.8 billion, making a total of $18.5 billion[1] roughly equal to the gold stock of the two countries combined ($18.8 billion) in September 1962. If the non-official holdings of dollar and sterling balances be included, says Lutz, the short term liabilities of the two countries would amount to 157 per cent of their gold stock. Then supposing that the currencies of Switzerland, France, W. Germany, Italy, and the Netherlands were added as key currencies to U. S. dollars and U. K. sterling, and regarding the gold stock of these seven countries combined that amounted to $31.3 billion dollars in September of the same year, the short-term foreign liabilities of the U. S. and the U. K. would be spread over the seven countries and the ratio of short-term foreign liabilities to the gold stock of these countries would come from the present negative net reserves to 60 and 95 per cent for dollar and sterling respectively.[2] The advantage of previous spread is, so Lutz argues, to remove the present danger of having short-term foreign liabilities bigger than the gold stock,

---

[1] Ibid., p. 12.

[2] Ibid.

or having negative net reserves which would affect the degree of confidence in a key currency. "The desire to spread the risk by distributing balances between several countries should be sufficient motive for adopting the multiple-currency standard."[1]

If a multiple-currency standard were adopted, it would be desirable, and Lutz thinks necessary, for all the key currency countries to stand ready to sell gold on request to monetary authorities of other nations at a fixed price, just as the U. S. does.[2] Moreover, he thinks that even if cooperation among the monetary authorities were to break down at one time with respect to one key-currency, "the impact on the foreign exchange and gold markets would be much smaller than if the same thing happened with respect to a country that was the only one in which foreign balances were held."[3]

Thus Lutz claims the following advantages for his proposed "multiple-currency standard." Its introduction "neither requires the creation of new international institutions nor the assumption of new functions by the existing ones." Moreover, it does not compel a surplus country to lend in order to equilibrate its balance of payments. Further, Lutz claims that upon the acceptance of his proposal "there would be room for a continuous growth in

---

[1] Ibid., p. 15.

[2] Ibid., p. 13.

[3] Ibid., p. 16.

international reserves until a time so far distant in future that no reasonable man would think it necessary to make preparations for it now."[1] In addition to these factors the growth of international currency reserves would not be at the cost of a deficit in the U. S. balance of payments and would thus encourage monetary discipline instead of monetary laxity.

There are, of course, several flaws in Lutz's arguments. For example, when he adds the currency of five other countries as key currencies to dollars and sterling, in taking the ratio of official holdings of these two currencies to gold, he neglects the fact that other countries have, from time to time, official holdings of currencies such as the German mark, etc. As a result, such a ratio is not very accurate. This is, however, a rather minor point. The basic flaw of his argument lies in the fact that his whole system is based on an iffy question. If other currencies are accepted as supplementary reserves, the international monetary problem would be solved. This is a possibility not too far removed from reality, and one might someday observe the adoption of these currencies as supplementary reserves. Yet this adoption cannot be imposed on countries. The monetary authorities of many central banks may not desire to keep any currency on their international reserves unless they

---

[1] Ibid., p. 16.

are fairly sure that it would be relatively stable. This is, of course, something of which no one can be sure, but one factor which does affect it is the experience of the central bankers with the past devaluations. One needs to remember that, in the words of Robert Roosa,

> In terms of equivalent gold content, following the general wave of currency adjustments in the 1930's, the deterioration in all currencies except the dollar has been striking. On a percentage scale, in relation to 1934, while the dollar remains at 100, the French franc works out, for example, at 3 per cent, the German mark at 4 per cent, and the Belgian franc at 9 per cent; although the Dutch guilder and the Swiss franc have held close to 40 per cent and 70 per cent, respectively.[1]

It is not surprising, in view of the above stability of dollar value in terms of gold, that central bankers have put their confidence in dollars as international reserves.

Furthermore, there is nothing wrong about the acceptance of new functions by the existing international institutions or even creation of new institutions if one could be confident that such arrangements would solve the problem. A plan that suggests radical changes may, in practice, prove to be better than one which requires no change or only minor modifications to the present system. Yet, in his plan Lutz is specific in saying that "the introduction of the multiple currency standard neither requires the creation of new international institutions

---

[1]Roosa, op. cit., p. 84.

nor the assumption of new functions by the existing ones."[1] From this one can see that Lutz does not see any necessity for creating new international institutions.

Last but not least is the question of how much the U. S. or U. K. would want to allow other countries to make their own currency a "key" one. It may be true that both of these countries seem to be interested in reform of the system, but it is somewhat questionable if they would want to accept any reform which might endanger their present position. Acceptance of other currencies as "key" may well be interpreted as a radical change--what Lutz claims not to introduce in his plan.

Creation of an International Central Bank

Pioneers:

Keynes' Plan

The basic purpose of this study as mentioned in the introduction is to review plans suggested in the 1960's, yet due to the pioneering significance of proposals developed by Keynes and Triffin, it was felt that they deserve to be mentioned in this study.

The Keynes Plan proposes

> to establish . . . an International Clearing Union, based on an international bank money, called (let us say) bancor, fixed (but not unalterably) in terms of gold and accepted as the equivalent of gold by the British Commonwealth and the United States and all the

---

[1]Lutz, op. cit., pp. 16-17.

> other members of the Union for the purpose of settling international balances. The Central Bank of all member states (and also of non-members) would keep accounts with the International Clearing union through which they would be entitled to settle their exchange balances with one another at their par value as defined in terms of the bancor. Countries having a favorable balance of payment with the rest of the world as a whole would find themselves in possession of a credit account with the Clearing Union, and those having an unfavorable balance would have a debit account.[1]

Each member state's quota would determine the extent to which it could enjoy credit facilities provided by the Union.[2] The Keynesian Plan, unwisely used, could result in an excessive expansion in international reserves and cause world-wide inflation.[3] Wisely used, however, it could free the world economy from an inadequate supply of liquidity. Keynes himself had this point in mind when he specified measures that would be necessary "to prevent the piling up on credit and debit balances without limit," and admits that "the system would have failed in the long run if it did not possess sufficient capacity for self-equilibrium to secure this."[4]

Keynes has permitted the use of overdraft facilities which is, to follow his own description, a British

---

[1]D. H. Robertson, "Post-War Monetary Plans," Economic Journal, Vol. 53 (December, 1943), p. 359.

[2]Ibid., p. 359.

[3]The possible inflationary impact of the Keynes Plan stems as much from the manner of determining quotas as the fact that quotas determine the member's credit possibilities.

[4]Ibid.

"practice of economizing the amount of cash deposits." Overdraft is a type of arrangement with a bank whereby the customer draws a check against his account for more than his deposit, and the bank agrees to debit his account to an amount not exceeding an agreed figure. This, in effect, is a credit that banks may extend to their customers. International money, said Keynes, would come into life whenever a country makes use of its overdraft privileges. The potential supply of international money which could be created under the Keynes Plan would be equal to the sum of the overdraft privileges of the deficit countries, which is identical with the potential credit balances of the surplus countries. Furthermore, any member state in debit could borrow bancors from the balance of any other member in credit.

Keynes made provisions as to deficit countries, surplus countries, and the equilibrating mechanism, and from these standpoints there is a striking similarity between the provisions of the Fund and the Keynes Plan. For example, if exchange depreciation is added to the equilibrium mechanism one can note that the IMF allows changes in the par value of the currency of a deficit country "if it is satisfied that the change is necessary to correct a fundamental disequilibrium."[1] As in the

---

[1]See: Halm, International Monetary Cooperation, op. cit., pp. 79-85.

Agreement, the nature of Keyne's recommendations concerning internal measures remains vague. Furthermore, the provisions of the Keynes Plan which are addressed to deficit countries are similar to those of the Agreement, as can be seen from the following:

> A member state may not increase its debit balance by more than a quarter of its quota within a year without the permission of the Governing Board. . . .
> The Governing Board may require from a member state having a debit balance reaching a half of its quota the deposit of suitable collateral against its debit balance. . . .
> If a member state's debit balance has exceeded three quarters of its quota . . . it may, in addition, be asked by the Governing Board to take measures to improve its position.[1]

Professor Williams asserts that a weakness of the Keynes Plan would be that "it might well seem to many of the member countries like getting something for nothing, since nothing has to be put up," and that "there might easily develop a strong urge for bigger and better quotas all around."[2] Furthermore, by looking at the Keynes Plan, one gets the impression that the creditor country is told to expand credit domestically, to appreciate its currency, to lower its tariffs, to increase wages, and to lend on long term at a rate equivalent to its surplus in order to restore equilibrium in its balance of payments, while equally precise rules of behavior--such as credit

---

[1]Robertson, op. cit. (Keynes Plan, II), pp. 355-356.

[2]John H. Williams, "Currency Stabilization: The Keynes and White Plans," Foreign Affairs, Vol. 21 (July 1943), p. 649.

contraction, etc.--are not given to debtor countries.

It is, in fact, at least partially because of the influence of Keynes on the Bretton Woods (New Hampshire) United Nations Monetary and Financial Conference--held in July 1944, that one can see new international institutions such as the International Monetary Fund and the International Bank for Reconstruction and Development have been created to provide a framework for freer and greater volume of international trade, investment, and exchange rate stability.

Triffin's Plan

In reviewing plans for reform of the international monetary system, the names of Professors Triffin and Machlup strike the reader. Both of these economists, as is obvious from their writings, have a very deep interest in the problem and deserve the position of outstanding contributors. Professor Hansen believes:

> Triffin's brilliant contributions have become world famous, and have aroused an immense amount of useful discussion. While future monetary reforms may well prove to be substantially different from Triffin's proposals, much credit should nevertheless be given to his provocative, original, and highly educational writings.[1]

Triffin's views have been expressed in his numerous writings but are conveniently pulled together in Gold and the Dollar Crisis.

---

[1]Hansen, op. cit., p. 31.

The basic and main features of the Triffin Plan can easily be condensed into three categories:

1) displacement of national currency reserves--as already pointed out he is against the use of national currencies such as dollars and pounds sterling as international money on the grounds that they are always exposed to devaluation, inconvertibility, blocking, or even default by the debtor country;

2) creation of additional reserves;

3) limitations and restrictions on the deposit creating power in international economic relations.

Before elaborating on the latter two features one needs to be reminded of two points.

1) The optimism of Triffin can be seen very clearly from the following quotation:

> Let me affirm in no uncertain terms that I do not believe for a minute that our present difficulties are either permanent or untractable. The strength and resiliency of our economy and of our policies make it certain that they can, and that they will, be solved.[1]

2) Our main problem is not to retrench, but to advance, not to cut out imports and our capital contribution to economic development abroad, but to restore our exports to levels sufficient to enable us to pursue in the future, on a sounder and more durable basis, policies which have abundantly proved their worth and which are indispensable both to our own internal growth and to the maintenance of our economic and political position in the world of tomorrow.[2]

---

[1] Triffin, Gold and the Dollar Crisis, op. cit., p. 3.

[2] Ibid., p. 7.

In order to create additional reserves, central banks should put some of their foreign exchange reserves into the IMF where they would become an international money, and all countries should, according to Triffin, "undertake to hold in the form of Fund deposits a uniform and agreed proportion of their gross monetary reserves."[1] A *minimum* deposit of 20 per cent is considered to be "ample to initiate the new system." Triffin is quite aware of the fact that his proposed system would endow the Fund with a lending capacity that if used inappropriately, might impart a strong inflationary bias to the world economy. Therefore he has gone a step further to think of some limitations on the Fund's annual lending capacity; this, in his opinion, would be necessary to assure just the right amount of international liquidity. Triffin maintains that various alternative criteria could be used for these limitations. The simplest one might be

> to limit the Fund's net lending, over any twelve months period, to a total amount which would, together with current increases in the world stock of monetary gold, increase world reserves by, let us say, 3 to 5 per cent a year.[2]

A reasonably conservative solution would be to retain a 3 per cent figure as "definitely non-inflationary."

What is presented above is basically Triffin's original plan which has been vigorously debated by

---

[1] Ibid., p. 10.

[2] Ibid., p. 11.

economists, by Congress, by the Administration, and even in the daily press here and abroad. With all due respect, one should try to see to what extent Triffin's claims are well-founded. From this standpoint one might cite the following points, not necessarily as inadequacies of his plan, but rather as points which should be considered more carefully.[1]

1) His discussions of future international liquidity point out that the total of international liquidity should increase at the same rate as world trade if exchange crises and contractionary forces are to be avoided. Behind this there is the idea of the quantity theory of money applied to international money. If this be true, the least one can say is that the quantity theory of money is a controversial issue.

2) Furthermore, the risks of exchange instability, in all probability, have been over-stated by Triffin due to his fears in regard to the U.S. balance of payments deficit. Besides, one gets the impression that, in his mind, the ability of the key currency countries to meet these risks has been understated but not completely denied.[2] The

---

[1]Due credit should be given to Oscar L. Altman's brilliant article, "Professor Triffin on International Liquidity and the Role of the Fund," IMF Staff Papers, op. cit., pp. 151-191 for reliance on his contributions.

[2]Triffin, Gold and the Dollar Crisis, op. cit., p. 3.

U.S., consistent with IMF policy, could support the dollar not only by its gold reserves but also by paying dollars to the IMF to draw other currencies from the IMF which could then be used to buy dollars in the foreign exchange markets, hence reducing any undue pressures on the dollar. Although the U.S. has rarely drawn on the Fund, there is no reason why it should not do so. The net creditor position of the U.S. in the Fund at the end of 1960 was $1.6 billion; even after exhausting this the U.S. could draw an additional $4.1 billion before IMF dollar holdings would reach 200 per cent of the U.S. quota.[1] Furthermore, if there were need for more resources, the IMF could obtain these through borrowing. It would, in fact, be very unlikely that U.S. gold sales coupled with sales of foreign currencies against the dollar up to as much as $6 billion[2] and the determined attitude of the IMF to support the dollar could fail to halt a run on the dollar.

3) True, the adequacy of the reserve position of any country is influenced by its growth of trade, but a number of other factors such as the amount of its overdue short-term debts, the size of its short and long term borrowing, gold pledges, bank and private holdings of foreign exchange,

---

[1] See U.S., Congress, Joint Economic Committee, International Effects of U.S. Economic Policy, 86th Cong., 2nd Sess., Study Paper No. 16, January 25, 1960, pp. 84-86.

[2] Ibid.

the size of its unused Fund quotas, the attitude of the IMF, and the like would have to be taken into account in computing future reserve requirements. Any general rule that reserves should grow at some given rate may well be arbitrary, leading to inflation or lowering of credit standards.

4) Looking at a domestic economy and the role of a central bank, one may assert that such banks have not shown any willingness to adopt a policy of automatically and consistently adding to the supply of money in line with production. It is, in fact, quite possible to point out periods in which central bankers have thought that increases in money supply were not necessarily required for high levels of economic activity. Such a situation in which central bank authorities were convinced that there was adequate increase in the velocity of the circulation of money resulted in no injection of money into the economy. To assert that the supply of international reserves should increase at an annual rate of three per cent (which is considered by Triffin as non-inflationary) would be to put the IMF in the position of doing what no central bank has been willing to do nationally.

Even Triffin's strong objections to the use of dollars as an international money is not plausible. Robert Roosa says:

> It is also important to weigh, and to weigh heavily, the positive consequences for the prestige and

> influence of the United States throughout the world that arise from the thousands of individual relationships necessarily created in the day-to-day uses that are made of dollar facilities.[1]

At best, Triffin's belief in serious deficiency of reserves is unproven; at worst it may be wrong, and in any case, the political as well as international implications of his proposal and the matter of central bankers' willingness to adopt such a plan would have to be taken into account. Apparently, Triffin himself recognizes that his proposal may have to be modified in the process of any actual negotiations for its implementation.

As this is a very brief presentation--and to some extent, evaluation--of Triffin's original plan--one final note is needed from his later thoughts. Even as late as 1966, the publication date of The World Money Maze, he says:

> We all recognize the existence of three separate, but inter-related problems in this area [international monetary system]: (a) the need for relatively prompt inter-country balance-of-payments adjustments, so as to avoid the growth of cumulative disequilibrium; (b) the need for long-term adaptation of the over-all volume of world reserves to the full noninflationary possibilities of economic growth; (c) most urgently, the need for reduction of the vulnerability now imparted to the system by an excessive overhang of international short-term dollar and sterling indebtedness resulting from past reserve accumulation by central banks (i.e. for the liquidation of the so-called 'reserve currency system').[2]

---

[1] Roosa, op. cit., p. 25.

[2] Triffin, The World Money Maze, op. cit., p. 320.

Contemporary Economists

Angell's Plan

In Angell's opinion, a "drastic" and extensive reorganization of the present international monetary system is not only urgent but also imperative.[1] Furthermore, "the most comprehensive plan hitherto proposed" is, in his opinion, that of Triffin, whose major objectives "are the right ones as far as they go"; yet Angell believes that Triffin's plan not only contains "serious internal defects," but also, with respect to gold, "does not go to the real heart of the problem."[2] Accordingly, Angell's objective is to offer an alternative plan to that advanced by Triffin. Because of this objective, Angell has used Triffin's plan as a preliminary framework for his analysis. The Angell Plan consists of two parts. First, he briefly describes what seems to him to be the "principal actual or alleged defects in Triffin's original proposals." Second, he proposes an outline of an alternative program which he believes is a workable and safe way that can effectively solve the problems of the system. Except with respect to gold, Angell presents a series of modifications to the Triffin Plan, rather than a departure in some wholly new direction.

---

[1]James W. Angell, "The Reorganization of the International Monetary System: An Alternative Proposal," The Economic Journal, vol. 71, December 1961, p. 707.

[2]Ibid.

In the following discussion, the basic issues of his plan will be brought up.

1. As indicated before, Triffin's principal proposed remedy for the system is to provide for increases in international liquidity when it is needed through an "expanded IMF." It attached to the XIMF a function of coping with the balance of payments deficit without differentiating between the types of deficits. Angell differentiates between different types of balance of payments deficits and maintains that the IMF should not try to handle all of these deficits. He outlines deficits in balances of payments caused by defective internal monetary or fiscal policies, inability to maintain the costs of exports (or import substitute) at fully competitive levels, excessive programs of investment and aid abroad, secondary inflation in the countries receiving such funds, collapse of a primary-producing country's exports, too large or too rapid development programs and political upheavals as situations that are to be considered to be deficits. "If Triffin's IMF were to try to take effective counteraction in any of these latter cases it would merely load itself with burdens which could easily threaten its liquidity and even its solvency."[1] There seems to be some element of truth in this assertion.

---

[1] Ibid., p. 693.

2. According to Angell, there is no differentiation between convertible currencies in Triffin's proposal and increases in IMF holdings of member currencies designed to relieve serious deficits of balance of payments. Angell believes:

> If the financial world comes to feel that the IMF's holdings of inconvertible currencies are excessive, . . . the result may easily be the creation of doubts (under Triffin's plan) about the IMF's own liquidity and even its solvency.[1]

This is, of course, an iffy question, and in order to prevent the IMF from becoming a source of inflation, Angell specifies that "its holdings of both types of currency should be specifically limited, and the limits on inconvertible currencies should probably be more severe."[2]

3. Triffin's requirement for the members of the IMF to keep a stated minimum proportion of their own monetary reserves in the form of IMF deposits in order to provide the IMF with additional financial resources is, in Angell's opinion, an objective which can better be achieved in other ways. Angell does not mention what specific other means he has in mind, and so long as these are not tested in practice, their relative standing remains a "value judgment."

4. Triffin was concerned with the utilization of a part of IMF resources in investments designed to promote

---

[1] Ibid., p. 693.

[2] Ibid.

economic development.[1] This concern, so Angell argues, has aroused misgivings. He argues that perhaps a small proportion of the IMF's resources "might be used, if only for political purposes," and goes on to say that "the assets underlying an international monetary system should not consist of any large quantity of long term placements, and still less be used directly to promote development."[2] It is needless to point out that this, again, is a value judgment, and Triffin's concern with the economic development of underdeveloped countries on economic as well as political grounds is more plausible than Angell's view of utilization of a small fraction of the IMF's resources and "only for political purposes." The reasons can be seen from a subsection in Chapter II above which deals with the economic concern of developing countries and need not be repeated at this point.

5. Angell holds that the limits Triffin proposes to set on the total volume of IMF deposits are "at best loosely defined." Those who have criticized the Triffin Plan on the ground that it is an engine of potentially disastrous inflation have, in Angell's opinion, exaggerated the case, but he thinks the criticism is "substantial enough to debar adoption of the plan in its present form."[3]

---

[1] Triffin, op. cit., pp. 117-118.

[2] The Economic Journal, op. cit., p. 694.

[3] Ibid.

This assertion can easily be rejected in view of another sentence that Angell himself has included in his plan: "One is always compelled to rely, to some extent, on the integrity, judgment and willpower of competent administrators."[1]

6.

> Finally, what seems to me the most serious defect of all in Triffin's plan is something which others may regard as its saving grace; its treatment of gold. Triffin makes a convincing demonstration of the total inadequacy of the free world's supply of monetary gold, yet he proposes to retain gold as one of the important and normal means for making international settlements; and the adoption of his plan could well increase rather than decrease the demand for gold.[2]

In view of the reasons discussed in a previous chapter, one can hardly find this argument convincing. Furthermore, the fondness of people for gold is a "value" that they presently adhere to, whether one likes it or not. Angell believes the difficulties in Triffin's proposal as mentioned above are substantial. He agrees, however, that

> some of them, it is true, could be materially reduced by a series of obvious modifications, of the plan itself. I think that even with these modifications, however, neither Triffin's plan nor any of the other proposals for reform that have been advanced to date quite gets to the heart of the matter.[3]

When one follows Angell's proposal, he can not help but

---

[1] Ibid., p. 707.

[2] Ibid.

[3] Ibid., p. 696.

notice that he is against the reliance on gold. It is true, as Angell mentions, that gold serves as "part or all of the internal central reserves of many free-world countries"; it is also true that it is used as "the last resort means for making international payments" and as a means of meeting demands of private and governmental gold hoarders all over the world. Yet Angell maintains: "This, then, is the contradiction: we have no way of making the supply of gold equal to the upper reaches of the probable aggregate demand, yet we cling tenaciously to the system. . . ."[1] One can pose the question: With the possibility of making use of reserves as a supplement for gold, is there really a need of equalizing the supply of gold with its demand? The answer that this question has received in practice appears to be negative.

The remainder of Angell's plan deals with some proposed details which will be but briefly presented here on the ground that what has already been presented shows adequately his values (and perhaps biases). One might add his interesting analogy:

> Our present system is a moderately good fair-weather craft when managed skillfully, but in storms it leaks badly and could easily founder. No mere patching or caulking will strengthen it sufficiently. It is hence imperative to devise some better set of arrangements and to do so quickly.[2]

---

[1] Ibid., p. 697.

[2] Ibid.

Needless to say a better set of arrangements in his opinion is one that would almost allow us to get rid of gold. In this respect, his idea is similar to Lerner's.

Angell's plan is based on two alternatives. First, monetary gold can be used for the settlement of all international transactions, discarding its use as an internal national reserve. The disadvantage of this proposal, according to Angell, is that it may not assure the system an international balance. Secondly, monetary gold can be used to enlarge national internal reserves. If this second alternative were accepted, IMF deposits can be used as a means of last resort settlement. According to Angell the latter alternative seems to be the most practicable one as it permits a gradual reduction or elimination of the part that gold now plays (the use of gold as backing for domestic money in many countries, its use as a means of speculation and international settlements) without exposing the system to a danger of collapse.

If the proposed plan were to be accepted, the need and the demand for gold for use as a means of international settlements would be eliminated, and IMF deposits would take the place of gold. Under this plan gold can still be a symbol of financial strength in all countries that so desired; however, its role as a means of international settlement would no longer exist.

In order to reconstitute the international monetary

system, Angell thinks a set of provisions are necessary. The IMF should be reorganized as an international central bank for its members. Initially the IMF should design its own gold-denominated deposit balances for each member in an amount equal to the subscription minus net debt of the member. From the standpoint of initial creation of IMF deposits if the plan is to work, members of the IMF should agree not only to accept title to IMF deposits in payment for any debt but also to count IMF deposits they own as part of their central monetary reserves. After the IMF original deposits are set-up, the members could increase their deposits with the IMF by selling either gold or domestic and foreign currencies to the IMF, thus making subsequent expansion of IMF deposits possible.

The members of the newly established international central bank under Angell's plan should agree that: a) any member and the IMF are free to buy gold that any holder wishes to sell; b) no member will request gold in settlement of due payments; c) the IMF will not request gold from members; d) the IMF may sell or lend gold to any member country but neither the IMF nor any member will sell gold to a private individual.

Limits on IMF holdings of currencies must also be established in order to prevent undue expansion of international liquidity. This maximum is set at 10 per cent during the first year or two of the new system; that is,

IMF holdings of either convertible or inconvertible currencies may not increase more than 10 per cent of the IMF holdings of the currencies. To remove temporary pressures the IMF should be permitted to increase this limit to 20 per cent temporarily, provided that this would not cause too much deposit expansion.

From the standpoint of sanctions Angell holds that the IMF should be given new powers to prevent excessive holding of a member's currency. This power may be provided for the IMF by giving it the right to consult the member(s) involved, to recommend measures that the member should take, to require the member to repurchase its currency, to refuse acceptance of a currency until appropriate measures recommended by the IMF are taken, or finally to expell the member if necessary.

Angell suggests special provisions for primary-product exporters since their balance of payment pressures are different from industrial nations; he proposes that medium and long term loans should be applied to them during periods of decline in their export proceeds. However, international monetary assistances should be limited to temporary assistance; otherwise their resources might become committed to illiquid situations.

Angell's plan focuses on the creation of an international central bank. His plan does not deal with various types of balance-of-payments pressures which may frequently

occur. It is also possible that the IMF may facilitate inflation on an international scale unless there is uniformly competent administration and wise judgments by IMF authorities. Angell's detailed plan also depends on many conditional provisions: i.e. if the IMF is reorganized, if it is given the additional safeguards, if the gold provisions are agreed to, if liquidity and soundness of the IMF be beyond question, if deposit balances of the members be equal to their total subscription. Of course, members of the IMF may not be especially amenable to some of these ifs; this raises questions about the feasibility of his proposals.

Stamp's Plan

Maxwell Stamp's original plan is as follows: The IMF, upon the permission of its Board of Governors, would issue "Fund Certificates" of about $3 billion a year. Such certificates would not be convertible into gold, yet their value would be expressed in its terms. Then, if and when the currency of a country is needed, the IMF certificates with their general backing would be accepted in exchange for a country's domestic money. Members of the Fund would further be able to exchange such certificates on the basis of known and agreed rates.[1] The

---

[1]Hon Maxwell Stamp, "The Stamp Plan--1962 Version" in Moorgate and Wall Street (Autumn 1962) reprinted in Robert G. Hawkins (ed.), "Compendium of Plans for International Monetary Reform," The Bulletin, No. 37-38 (New

scheme is also meant to reduce the pressure of conversion into gold to which some countries such as the U.S. are presently obligated. Henceforward, the U.S., and others, would have the "option of selling gold or tendering any Fund Certificates in their possession."[1]

According to Stamp the Fund would "give away"[2] its certificates to an aid coordinating agency which would in turn allocate them among underdeveloped countries on the basis of an agreed program. The receiving countries would use such certificates in payment of their purchases from industrialized countries "by tendering them to the central bank" and acquiring Dutch marks, dollars, sterling, etc. If a country were in overall deficit it could, if it so desired, use these certificates instead of losing gold. If, on the other hand, a country were in overall surplus, such certificates could be added to its reserves. In this manner the Certificates would eventually end up with the surplus countries and in the words of Stamp "would have automatically lent part of that surplus to the rest of the world."[3]

York: New York University, C. J. Devine Institute of Finance, December 1965), pp. 60-68.

[1] Ibid., p. 60.

[2] The words "give away" are taken from Stamp himself, and later he himself has realized that he should not have used them. Ibid., p. 66.

[3] Ibid., p. 60.

The reader of the Stamp Plan is impressed very early by the attention which he has devoted to developing countries. Stamp has a strong reason to believe that this is necessary. In his estimation the world, despite its "great unused capacity," cannot find "the mechanism to produce the goods which the poorer nations so urgently need." Perhaps the world can find this mechanism, but it has not exhibited much willingness to do so.

There have been two types of objections to this original Stamp plan. First, there are those who deny the existence of any shortage of international liquidity; second are those who, accepting a shortage, claim that there are better ways of curing it. In response to such criticism Stamp holds:

> I think one can admit that there may be no immediate shortage of international liquidity and yet believe that an annual increase in world reserves (beyond the supplies of new gold) is desirable, even essential, if the optimum performance from the world's economic system is to be obtained.[1]

This argument is in line with the idea held by some other economists of the necessity of some annual increase in reserves regardless of their magnitude.[2]

Stamp sets up an interesting hypothesis by saying, "Countries do not like going to the Fund to borrow, and I

---

[1] Ibid., p. 61.

[2] See, for instance, Machlup's analogy of "My Wife's Wardrobe" which has become known as The Mrs. Machlup's Wardrobe Theory of Monetary Reserves, in Machlup, "The Need for Monetary Reserves," op. cit., p. 27.

think it would be true to say that most developed countries would like to have higher reserves."[1] He further adds that "if Russia were to put a considerable quantity of gold on the world market there is no reason to believe that countries would not be glad to absorb it."[2] It is also added that the developing countries cannot afford the luxury of keeping more resources in an idle form of gold or dollar balances. His original plan then does not necessarily rest on a hypothesis of adequacy or inadequacy of international liquidity; it rather rests on the following hypotheses: a) existence of a "constant struggle by all advanced countries to achieve an export surplus; b) world capability of producing more goods and services that are urgently needed by underdeveloped countries; c) and finally that this extra production may need extra reserves or extra credit.

Referring to Triffin's plan, Stamp indicates that "the need is not to give the Fund bigger resources to lend to members in trouble"--which seems to Stamp to be the crux of the Triffin Plan--but is "to create conditions under which the members are less likely to get into trouble."[3] Thus one gets the impression that one of the main objectives of Stamp in his original plan is to prevent

---

[1] Stamp, op. cit., p. 62.

[2] Ibid.

[3] Ibid., p. 64.

troubles in terms of balance of payment deficits for certain countries, rather than to cure the illness once it is allowed to develop. This interpretation seems to be in line with his own comments as follows:

> The injection of the new purchasing power into the pockets of the underdeveloped countries would mean that fewer advanced countries would run deficits and, therefore, the probable calls on the Fund to cover ordinary balance of payments crises would be lessened.[1]

Stamp's original plan has been criticized on several grounds, and in response to such criticism he has made a number of modifications in his original plan as outlined above. Such modifications can be presented in the following form:

1. "Instead of being given away to the underdeveloped countries, the Fund Certificates or Fund Credit could be lent."[2]
2. Some backing might be given to the Certificates, and some limits (equal to their quotas) might be put to the extent of obligation of central banks in accepting them.
3. It would be desirable, according to Stamp, for the Fund Certificates to carry a modest interest rate, but in practice it may not be possible.
4. If the extra purchasing power created by Fund Certificates were to be used only in deficit countries, it would be fine. But there is an equal chance for them to be spent in economies like Germany who have reached full

---

[1] Ibid., p. 64.

[2] Ibid., p. 66.

employment. Therefore, there is a fear that this might add to present difficulties in controlling inflation. Stamp tries to overcome this criticism by suggesting that "proper provision must be made to protect the interest of those countries which are in surplus or very fully employed by allowing them, in whole, or in part, to 'opt out.'"[1] In short, the new version of Stamp's plan not only tries to remove the objections raised against his original plan, but also sets limits on both the amount of Certificates any one country is obliged to accept and what the Fund can create in the way of credit.

The criticisms raised against the Stamp Plan--such as the questionability of giving away some extra purchasing power to underdeveloped countries which may already be under inflationary pressures, the controversial nature of setting no limits on the credit creating ability of the Fund, etc.--can be read from Stamp's defenses as enumerated above; for this reason they have not been discussed separately here. There seems to be, however, one basic flaw in his plan which should be discussed here. According to Stamp, as indicated above, if a country were in overall surplus, it would add the Fund Certificates to its reserves. In his estimation, the reserve would eventually end up with surplus countries and would be automatically lent to

---

[1] Ibid., p. 65.

the rest of the world. Stamp does not go a step further to see what would happen if a surplus country does not add the Certificates to its reserves. Stated differently, his whole analysis of "Fund Certificates" is based on an assumption of automatic lending which may not always hold true. It is perhaps in view of such an automacity that the Fund believes: "Countries that are tending to run into persistent surpluses should be willing to pursue, within limits, a more expansionary policy than they would have been inclined to adopt for purely domestic reasons."[1]

Creation of International Reserves

Bernstein's Plan

It will be helpful if Bernstein's plan is reviewed in the light of the value premises that he sets out at the beginning of his plan. It is sometimes said that reserve centers tend to generate inflation in their own economies and to transmit it to other countries. This is further taken as a token of weakness of the present gold-exchange standard system. Bernstein thinks the U.S. is not generating inflation in other countries.[2] Further, it is not

---

[1] 1964 Annual Report, op. cit., p. 27.

[2] Edward M. Bernstein, "Further Evolution of the International Monetary System," in Moorgate and Wall Street (Summer 1965) reprinted in Hawkins (ed.), op. cit., pp. 83-95. In Bernstein's opinion, the U.S. has had unused capacity, unemployed labor; its money supply has increased at an average annual rate of 2.2 per cent since 1958; its wholesale prices were about the same in 1965 as they were in 1958; and the rise in cost of living has been minimal. On

encouraged to nelgect corrective measures, although its deficit does create certain monetary problems for some other countries. These problems, on the basis of which the present system of providing international monetary reserves "can be properly criticized" are, according to Bernstein: a) the growth of monetary reserves depends on the U.S. balance of payments deficit; b) dollars and sterling expose reserve centers to a danger of massive conversion of their currencies into gold; c) reserve holdings "make it possible to delay measures" for their deficits; d) and finally, so long as gold is the ultimate reserve asset, the amount of monetary gold is too small for a convertible currency world. Bernstein also asserts that if the U.S. deficit is eliminated, "the growth of monetary reserves will be very small, consisting almost entirely of gold," which has a declining proportion in terms of total monetary reserves.[1]

As can be seen from these value premises, the focus of Bernstein's attention is basically upon reserves which in the present system "are linked to gold and are intended to be convertible into gold, directly or indirectly."[2] Referring to the fact that the Group of Ten and Switzerland hold 86 per cent of the total gold reserves of all

---

these bases, Bernstein concludes this is not the behavior of a country troubled by inflation (p. 83).

[1] Ibid., pp. 84-85.

[2] Ibid., p. 86.

countries outside the Communist bloc, and pointing out that the growth of gold reserves cannot be adequate for future needs, Bernstein maintains that the best way to cope with the difficulties of international liquidity is to have these eleven countries establish "a composite standard consisting of gold and currency reserve units for transactions with each other."[1]

A "Reserve Unit," according to Bernstein, would be equal to one U.S. dollar with its present fineness and weight in terms of gold. It would, however, not consist entirely of U.S. dollars; Canadian dollars, German marks, Swiss, French, and Belgian francs, Swedish kronors, pounds sterling, lire, yen, and guilders could all be included in the Reserve Units as well. To accomplish this, Bernstein specifies that each participating member would "undertake to hold reserve units in an agreed ratio to its holding of gold" and also agree with the conversion of its currency into Reserve Units, just like into gold, in this ratio.[2]

Bernstein has given a role of "trustee" to the IMF; participating countries (the Group of Ten and Switzerland) would deposit their own currency with the IMF acting as trustee for them.[3] Thus if the U.K. deposited 100 million in sterling, it would be credited with 280 million Reserve Units--with an exchange rate of £1 = $2.80, and because a

---

[1] Ibid., p. 86.

[2] Ibid., p. 87.

[3] Ibid.

reserve unit would be equal to one U.S. gold dollar. Similarly if the U.S. deposited a hundred million dollars, it would be credited with a hundred million reserve units. The process of obtaining reserve units would be the same for other participating countries. Thus the distribution of reserve units among countries would depend on how much of its own money a country would be willing to deposit with the IMF. As the IMF members deposited their currencies with the IMF, they would be credited with an equivalent amount in reserve units. What if all countries wished to deposit with the IMF a large proportion of their currency? Would there be any excessive increase in international liquidity due to too much reserve units? Bernstein thinks there will not be a sudden and excessive increase in international liquidity as the creation of reserve units would take place gradually. He further specifies in this context that in general the creation of reserve units in each year should be based on the rate of growth of gold and foreign exchange in order to secure "a growth in aggregate reserves at a moderate rate, about 3 to 4 per cent a year."[1] Bernstein would seem to limit his composite standard (reserve unit) to the Group of Ten and Switzerland,[2] and in this context he does not mention underdeveloped countries. Furthermore, throughout his

---

[1] Ibid., p. 87.

[2] Ibid., p. 86.

plan he remains silent on the share of the reserve units that would possibly go to the underdeveloped countries. Thus from what Bernstein has said one gets the impression that the underdeveloped countries could not hold the reserve units directly; they could, however, take advantage of them indirectly, due to the fact that the process of reserve unit creation would add to international liquidity, and they would not be suffering as much from illiquidity as they would otherwise have to.

One can safely hold that Bernstein, just like Triffin, shows his awareness of the possible dangers of excessive international liquidity by pointing out that: a) the creation of reserve units would take place gradually, and b) the objective would be to secure a moderate rate of growth of reserves about 3 to 4 per cent a year.[1] Furthermore, in spite of the fact that the Bernstein Plan is based on the sole participation of the eleven countries, underdeveloped countries are not completely forgotten in his scheme. What such countries need is "better access to a larger pool of reserves held by the IMF." This need, in Bernstein's opinion, is based on the assertion that underdeveloped countries "do not hold large reserves of their own because they cannot afford to invest real resources in this form."[2]

---

[1] Ibid., p. 87.

[2] Ibid., pp. 92-93.

There are a number of difficult questions that would have to be taken into consideration if the establishment of a composite gold standard is to work. First, there is the problem of the composition of reserve units, that is, "the proportion of the Reserve Unit that would be comprised of each national currency." Different criteria can be used for this purpose--such as the importance of each country in international trade and/or investment, their share in international payments, etc. Yet, their quotas in the IMF seems to Bernstein to be a reasonable starting point[1] in order to determine the relative proportion of each currency in the reserve units. This criterion suffers from the fact that the IMF quotas of some countries, especially in continental Europe, may not reflect their increased role in the international economy. Secondly, the ratio of gold to reserve units in converting the currencies of the participating countries should be determined. This should be high enough to maintain the "disciplinary effect of gold as the ultimate reserve asset," yet it should not be so high to make the already sensitive present system more sensitive to gold.

One advantage of the Bernstein Plan is that participating countries would be free to hold reserves in whatever form--gold, dollars, sterling, and reserve units --they wish. They are already obliged, under the IMF

---

[1] Ibid., p. 87.

agreement, to convert into gold balances of their currencies held by others. The only modification that Bernstein suggests is that the conversion would hereafter be not only in gold, but also in reserve units in the prescribed proportion (2/3 gold and 1/3 reserve units). Because of the similarity of his conversion arrangements to already existing obligations under the IMF arrangements, Bernstein asserts that "the adoption of the composite gold standard would involve a minimum change in the present international monetary system." Furthermore, as Bernstein prescribes, countries would enjoy the further freedom of lending or selling--whichever they wish--their excess reserve units to other countries. From these standpoints, then, his plan can be considered voluntary in nature.

The big disadvantage of Bernstein's plan is, however, limiting the role of IMF to that of a trustee only--it is capable of fulfilling more functions. It can be inferred that Bernstein himself has noted such a disadvantage as he says at a later point: "It may be desirable to give the IMF a more positive role in the composite gold standard than merely that of a trustee."[1] A solution that he has suggested in this connection is to assign the IMF a 25 per cent[2] participation in the reserve unit account

---

[1] Ibid., p. 93.

[2] Why 25 per cent, and not more or less, is not clear from Bernstein's writing. Ibid.

meaning that the reserve units could each consist of 25 cents in notes of the IMF, and 75 cents in the currencies of the eleven participating countries.[1]

Exclusion of the underdeveloped countries from participation in the establishment of the reserve units, though an inadequacy of his plan, is not without reason.

> The special position of these currencies of the Group of Ten and Switzerland in international trade and payments is evident in the operations of the IMF. Of the more than $10 billion of currencies drawn from the IMF in the past seventeen years, 98 percent has been in the currencies of the Group of Ten. The IMF is aware that its liquidity, its capacity to extend reserve credit to its members, depends essentially on its resources in the form of the currencies of the Group of Ten. That is why the IMF has entered into the Special Arrangements to Borrow an aggregate of up to $6 billion from these countries. The Group of Ten is aware that when there is pressure on their currencies the problem can be met only by using the currencies of the other participants. That is why they have made arrangements for reciprocal swaps of more than $5 billion with each other.[2]

In spite of the undemocratic nature of the Bernstein Plan in the sense that it confines the creation of the reserve units to eleven countries, the position of dollars and sterling would not be inferior to that they now hold. Another advantage of this plan is that it would allow countries to whom the dollar and sterling are more attractive reserves than gold to fulfill their desire of earning a return on part of their reserve holdings. Still

---

[1] Ibid., p. 93.

[2] Ibid., p. 92.

another advantage is that the U.K. and the U.S. would benefit as would every other country from the establishment of an orderly pattern of international payments. It should also be noted that the assumption upon which his plan is based is that the large industrial countries can and will succeed in maintaining a strong balance of payments.[1]

In opposition one could argue that, from time to time, some of the assertions in the Bernstein Plan are not necessarily plausible. For example,

> For nine-tenths of the 102 members of the IMF such measures to give them greater and more assured access to reserve credit would be far more valuable than participation in composite gold standard of which they would in any case make very little if any use.[2]

As another example, "It should be emphasized that the composite gold standard is intended to deal with a problem that is peculiar to the large industrial countries." This may be true, at one level of analysis, but it may not be correct if such assertions are generalized at the expense of complete neglect of the concern of any other country (other than the eleven) in the smooth functioning of international monetary system. These are all minor points; the major issue, however, is whether the countries could first agree on the creation of Reserve Units with their

---

[1] Ibid., p. 95.

[2] Ibid., p. 93.

different attitudes, national, and political feelings, and also whether they would give top priority to reserve creation.

It can be said that Bernstein was not trying to present a complete plan, but, instead, an outline from which negotiation could take place. This can be supported in view of the fact that after making his comments on the problem of the present international monetary system (as explained earlier at the beginning of his plan) he immediately adds: "These are some of the problems that must be dealt with in any program for strengthening the international monetary system."[1]

Roosa's Plan

According to Robert Roosa, Under Secretary of the U.S. Treasury for Monetary Affairs from 1961 to 1965, the international monetary system has "functioned remarkably well,"[2] but the real trouble, ex ante, is

> whether, under the evolving conditions of convertibility, the monetary system can amply fulfill its potentials over the years ahead of the primary responsibility for supplying added reserves continues to rest upon a reserve currency created by one country.[3]

It is important to note that Roosa has brilliantly based his "Agenda for Future" on the following assertions:

---

[1] Ibid., p. 85.

[2] Roosa, op. cit., p. 73.

[3] Ibid.

> There are no economic needs that I can visualize for which facilities or potentialities within the system as it exists today are not at least minimally adequate, taking into account the innovations of the past few years. . . . I do agree with those who wish urgently to pursue the search for new methods of broadening and adding to the facilities now available.[1]

The agenda that Roosa proposes for the future is centered around "developing some sort of standards for determining what the aggregate increase in international monetary reserves ought to be."[2] This, in his opinion, must be developed in such a way that the positions of gold, dollars, sterling, and the IMF in the present system not be impaired,[3] and that newly created reserves should not interfere with the "performance by the IMF of all its existing monetary and credit functions." Finally, new reserves, "should not interfere with the services performed by the vehicle currencies."[4] The Roosa Plan can further be characterized as voluntary in nature since he has emphasized that "the holding and use of any new reserves should be subject to the free choice of individual sovereign nations." Moreover, his premises are cautious in that he thinks new reserves "should not alter or disrupt any country's existing internal control over the issuance of its

---

[1] Ibid., p. 67.

[2] Ibid.

[3] Ibid., p. 69.

[4] Ibid.

own currency."[1] Finally, one should bear in mind that "confidence is essential for the survival of any monetary system." In order to assure such confidence, attempts should be made to make new reserves and new credit facilities "fit as closely as possible into familiar patterns of experience and assure the continuity of existing methods for making payments or employing balances."[2]

Comprehension of these value premises upon which Roosa bases his proposal is a necessary and an integral part of his plan. In fact, many parts of his proposal are another way of expressing these same value premises. After setting forth his own diagnosis of the international monetary problem, Roosa proposes workable ways of improving the present system. Most of his attention is focused on the creation of a new international unit, which might be called a "Fund Unit Account,"[3] that countries could add to their foreign exchange reserves. Whether his whole reliance on the creation of new reserves (with no comments on what the position of new gold production should be) can be defended remains an open issue. There is no doubt in his mind that "the area that most needs to be probed in exploring the potentials for major innovation is that of creating

---

[1] Ibid., p. 69.

[2] Ibid.

[3] Ibid., p. 76.

additional reserve assets through group action."[1]

One can go further into an orderly discussion of Roosa's proposal with a glance at the crucial questions that he has posed, and also at the answers he gives. The following discussion follows the general pattern found in Roosa's work.

The first question he poses is: "Where should the new unit be created?" His answer is "within the IMF," with the further comment that the proportionate shares of each country in their contribution would be determined by

> taking into consideration the extent to which their currencies had been used for these other international purposes (as reserve currencies or through drawings of their currencies from the IMF) over recent years. . . . In turn, each contributing country would receive a corresponding 'checking account deposit' in the Fund Unit Account. This it could spend, lend, invest, or use to make grants at its own discretion.[2]

In this way he claims that present reserve currencies would be supplemented but not supplanted.[3] In order to carry out reserve creation, an "issue department," Roosa urges, should be created within the IMF as a new entity for the distinct purpose of creating monetary reserves.[4]

The second question is: "Who will contribute to the new unit, and in what proportions?" Answering this

---

[1] Ibid., p. 74.

[2] Ibid., pp. 76-77.

[3] Ibid., p. 77.

[4] Ibid., p. 79.

question, Roosa asserts that the "new unit" will be formed by the contribution of various national currencies. In this respect, he takes the attitude that not only countries whose currencies have already been used for international reserve purposes should be qualified, but also "countries whose currencies have been used in drawings at the IMF should be eligible."[1] As to the proportionate share, Roosa goes on to specify that it too could be resolved on the basis of the extent to which each currency has been used for international reserves. An agreeable criterion could be to give "great weight to the ratio between the use made of each currency over, say, the preceding five years, both as reserve currencies and through drawings from the IMF."[2]

The next question is: "Who will receive the original contribution and in what proportions?" A simple answer is given to this question by Roosa:

> Once a Fund Unit is established, it is a virtually inevitable consequence of the elements of double entry bookkeeping that the original distribution of the new units (that is, the 'checking account' claims on the Fund Unit Account) will have to be made to the countries whose currencies are contributed to the account.

Moreover, the contributing countries should obtain a share in the Fund Units "corresponding exactly with the proportion of their own currency contribution to the total."[3]

---

[1] Ibid., p. 80.

[2] Ibid., p. 81.

[3] Ibid., p. 86.

It seems to Roosa that a rate of interest of about "3 per cent"[1] should "be payable in the currencies put into the Fund Unit Account by each contributing country, although no interest should be paid by the Account in turn to holders of Fund Units."[2] This, of course, may reduce the practical attractiveness of the Roosa Plan; however, Roosa believes that it is a necessary feature. He holds that since member countries could employ these Fund Units in settlement of their external commitments, they have, in effect, borrowed an internationally usable asset through the use of their own currency; thus they should pay a charge for this service. Such interest rates would, according to Roosa, provide the IMF with sufficient income "to cover all administrative expenses and permit a modest annual transfer to a surplus account."[3] Roosa further maintains that countries contributing to the Fund Units should maintain the gold value of their contributions.[4] Because of this, he thinks "the Fund Units would, or should, within a short time acquire a respect and standing

---

[1] Ibid., p. 91.

[2] Ibid., p. 90.

[3] Ibid., p. 91.

[4] Ibid.; this would mean that if, for some reason, a contributing country should devalue, ". . . it should 'pay-up' an additional amount of its own currency to fully offset the decline in the value of the amount already contributed to the Account. . . .," p. 80.

comparable to gold, as a reserve asset."[1]

Still another question is: "Who will use the new unit, and how?" To this Roosa answers "the Fund Unit should be exchangeable at any central bank for its own currency."[2] Such units would ordinarily be expected, so Roosa argues, to "flow out as a result of increased imports, or paying past debts, or an increased granting of credit, or increased investment, or increased aid."[3] Furthermore, since there is an obligation on the part of contributing countries to maintain the gold-dollar value of their contribution, and since there is the possibility of converting these Fund Units into gold, the monetary authorities of every country "would thus be free to acquire and use such units in their own reserves, in payments to other monetary authorities, and in payments to international financial institutions."[4]

Last, but certainly not least, is a question that Roosa raises against the above background. The question is: Who will decide upon the amounts (of reserves), and how? As can be seen from the following, Roosa's suggestions have all been conditioned by respect for the necessities

---

[1] Ibid., p. 91.

[2] Ibid., p. 94.

[3] Ibid., p. 93.

[4] Ibid., p. 95.

of sovereignty and present institutions; yet, he fully realizes that:

> It is on these questions of representation and of the possible infringement of sovereignty, as the amount and extent of national commitments were to be determined, that all proposals for international monetary reform have encountered their gravest difficulty.[1]

In his opinion, the management of the Fund could be readily delegated to the IMF's Managing Director and his Staff, "operating in conformity with the general rules and specific decisions reached in the Executive Board."[2]

Evaluation of such a neat and clearly defined proposal is not an easy task, yet it is relatively easier than those which have been spelled out only in terms of general outlines. As can be seen from what has been presented so far, one can safely hold that the basic questions related to Roosa's proposed system as well as his value premises are very clearly defined. Furthermore, he readily admits that details can always be "resolved more effectively in the full light of considerations evoked by actual negotiation."[3] Thus he should be given full credit for his flexibility of thought and also for a firm proposal. Indeed, his plan can be proclaimed as a practical one, and at the same time it is based on well-founded theoretical considerations. It also deserves merit from

---

[1] Ibid., p. 95.

[2] Ibid.

[3] Ibid., p. 81.

the standpoint of the least radical changes he proposes and the most respectful attitude to the IMF, dollar, sterling, and even to other countries whose currencies have been used as international reserves or drawn from the IMF.

Nevertheless, there are no practical limitations imposed on the maximum amount of reserves to be created; all is left to the discretion of the IMF. The great degree of discretion given to the IMF is not necessarily objectionable, but hasty evaluation of a situation could lead to inappropriate actions. The big question on which Roosa is apparently silent is: Would there be any excessive liquidity created in the world monetary system? At the same time, the question, What would, or should, happen to the annual increase in the production of gold?, is not dealt within the Roosa Plan.

Hansen's Plan

Professor A. H. Hansen proposes a plan for which he claims no particular originality.[1] In his opinion a new monetary mechanism should be built around the Group of Ten. The General Arrangements to Borrow is, according to him, a new dimension to the international monetary system as it introduced a new approach to the system.[2]

---

[1]Hansen, op. cit., p. 111.

[2]Ibid.

He asserts that an international medium of exchange must be founded on strong currencies in order to be supported by the "financial security of the ten leading industrial countries."

Hansen asserts that "we need an 'international dollar'" to be managed under "a new governing board consisting of the managing director of the Fund and delegates representing the monetary authorities of the Group of Ten."[1] He further reasons that "we already have a U.S. dollar and a Canadian dollar. Why not an international dollar?"[2] Hansen's plan consists of two steps: "a modest first step" and "a bolder next step" as he has named them. Such steps are built upon established institutions. His proposal is basically as follows:

> Let the IMF adopt as an appropriate goal for a workable gold-exchange standard a maximum gold ratio[3] of 60 per cent. Such declaration would give recognition to the fact that the current wide differences in gold ratios do not reflect 'an equitable distribution of the burdens of international monetary cooperation.'[4]

One implication of this proposal, as Hansen readily admits, is that high-gold-ratio countries should accept "a gradual evolution toward a genuine gold-exchange standard in place

---

[1] Ibid., p. 111.

[2] Ibid., p. 112.

[3] The ratio of gold to total reserves of a country, i.e., gold, foreign exchange, borrowing potential, etc.

[4] Ibid., p. 113.

of their current heavy reliance on gold." Realizing that this is highly improbable for such countries, Hansen seeks a way out of this difficulty. His solution is to

> permit the holders of reserve currencies to deposit their dollar (and sterling) balances in exchange for new international units with a new division organized within the IMF. We might call it the International Reserve System, the IRS. The IRS would then hold the dollar and sterling balances, which under the Fund Articles of Agreement would carry a gold-value guarantee. The IRS would then invest the dollar and sterling balances in longterm, interest-bearing U.S. and U.K. government securities. The IRS would have monetized the long term securities in question into new international units denominated as international dollars.[1]

At the beginning the IRS is not given permission "to play the role of a full-fledged international bank." Later, however, it could accept "deposits of reserve currencies and issue international dollars in exchange." Such international dollars would be regarded "as good as gold, and in fact, as an interest-bearing asset, better than gold."[2]

Hansen's "bolder next step" is "to permit the IRS on its own initiative to invest in long term government securities of any of the ten leading countries," with their consent, if and when it becomes clear that more international liquidity is needed. At this stage, the IRS is expected to play the role of a full-fledged international credit-creating bank under the control of a governing board representing the Group of Ten countries. There is, Hansen

---

[1] Ibid., p. 114.

[2] Ibid.

asserts, a danger of bureaucracy; however, he thinks this could be overcome through informal methods of international collaboration such as telephone consultations if necessary.

Hansen's plan, though interesting, has many features similar to those presented in the plans suggested by Edward M. Bernstein and by Maudling with some differences which will be cleared after the review of these plans. Furthermore, countries are, under his plan, free to accumulate foreign exchange on their own. This plan, however, suffers from the standpoint of its lack of appeal to underdeveloped countries, the lack of readiness of the ten industrialized countries--or at least some of them--to accept a maximum gold ratio of 60 per cent, the danger of bureaucratic procedures if and when some countries of the Group of Ten are not anxious for over-the-phone consultations, dangers of haste in evaluating circumstances of time in terms of realization of the quantitative needs for international liquidity, and leaving underdeveloped countries with the universal problems of short-term balance of payments disequilibria.

Zolotas' Plan

An incisive view of the plan of Xenophon Zolotas, Governor of the Bank of Greece, may be obtained if attention is directed to the following quotation:

> In the last two years the annual outflow of long-term capital alone accounts for more than the corresponding overall deficit in the U.S. balance of payments. The

> still existing restrictions on capital exports in several industrial countries, and, more significantly, the organizational and institutional shortcomings of capital markets outside the U.S., impose on her, in addition to the responsibilities of a reserve center, the task of satisfying capital requirements in the rest of the world, including the highly developed countries. This situation is incompatible with the smooth functioning of the gold exchange standard, which requires some measure of correspondence in the availability and freedom of movement of capital among major trading countries. The resulting strains from this lopsided operation of the international financial mechanism are being accentuated by the movement of short-term funds, partly in reference to interest rate differentials.[1]

Zolotas has formulated his plan with the objective of reinforcing the present gold-exchange standard against the dangers of hot-money and speculative movements. His plan, like those of E. M. Bernstein, Roosa, and Hansen, is based on the idea of mutual assistance among central banks as well as between central banks and the IMF. Realizing that some countries are subject to short term capital flows (in and out) and to balance of payments disequilibria, Zolotas proposes that the IMF should undertake to borrow

---

[1] IMF, Summary Proceedings, Annual Meeting, 1963, p. 93. Zolotas scheme has been outlined and developed in the following speeches and papers: Xenophon Zolotas, Statement at the 1962 Annual Meeting of the IMF, Summary Proceedings, 1962, pp. 108-116; International Monetary Order, Athens, 1962; The Multicurrency Standard and the International Monetary Fund, Athens, 1963; Statement at the 1964 Annual Meeting of the IMF, Summary Proceedings, 1964, pp. 86-93; Remodelling the International Monetary System, Athens, 1965; and more recently in his: Alternative Systems for International Monetary Reform (Athens: Bank of Greece--papers and lectures, No. 18, 1965). This last source will be the source upon which this section is based, unless otherwise mentioned.

from the central banks in countries that are receiving capital inflows and lend the funds so acquired to the central banks of the countries suffering from the capital outflows.[1]

In essence, then, Zolotas aims at providing the international economy with more liquidity. In his opinion "gold is too scarce a reserve asset to be assigned a quantitatively dominant role in international transactions,"[2] and the reform of the international monetary system "must provide for rational creation of international liquidity promoting the rapid non-inflationary expansion of world production and trade."[3]

Zolotas also aims at enabling the IMF to reduce the undesirable effects of destabilizing capital outflows on the balance of payments of countries.[4] For this to be achieved the IMF is given, in addition to its present roles and authorities, the role of a guarantor or intermediary; it fulfills this role through borrowing international means of payments from central banks in the capital receiving countries and passing them on to the financial authorities of central banks stormed by capital outflows.

---

[1]Xenophon Zolotas, in International Monetary Fund, Summary Proceedings of the Twelfth Annual Meeting of the Board of Governors (Washington, D. C., 1957), p. 42.

[2]Alternative Systems for . . ., op. cit., p. 32.

[3]Ibid., p. 17.

[4]Ibid.

It should be noted that Zolotas has a much broader outlook than simply dealing with undesirable effects of capital movements. He establishes a "Multi-currency International Standard,"[1] and his recommendation in this respect is that the reserve currency countries should, through cooperation, "build up sufficient balances of major, convertible currencies to be used as 'masse de manoeuvre' in the foreign exchange market and to serve as the first line of defense of the key currencies."[2]

There are three significant features of the Zolotas Plan that are worth mentioning. First, to provide security against possible devaluation, Zolotas thinks that every country whose currency is used as international reserves within the pool of multi-currency international standard should provide other central bankers with a gold-value guarantee so that they need not fear devaluation. This, in Zolotas' opinion, need not necessarily be brought about by a gold guarantee; provision of a gold clause may be sufficient to reduce or eliminate devaluation fears. Second, Zolotas thinks that central bankers have a preference for keeping gold rather than reserves.[3] In order to

---

[1] Ibid., p. 25.

[2] Xenophon Zolotas, Towards a Reinforced Gold Exchange Standard (Athens: Bank of Greece--papers and lectures, no. 7, 1961), p. 11 reprinted in Machlup, "Plans for Reform of . . .," op. cit., p. 24.

[3] This should not be generalized and Zolotas certainly knows that, in recent years, some central bankers

overcome this tendency, he suggests that preferential arrangements such as an interest rate should be created to make it attractive for central bankers to hold a greater part of their international reserves in the form of foreign exchange or reserves (rather than gold). Third, the key currency balances received by surplus countries and deposited in the Fund should be made repayable on demand to the depositor country whenever it is in balance of payments difficulty.[1]

The purposes for which loans are to be made under the Zolotas Plan reflect an important change from official thinking since the time of the Bretton Woods agreements. International loans then were to be made to countries experiencing balance of payment deficits and not too much attention was paid to disequilibria caused by capital movements. Zolotas is concerned specifically with helping balance of payments disequilibria and has designed the loans to be given to the countries suffering from capital outflows. There are possible advantages for both the borrowing and the lending countries under a system of multi-currency standard as Zolotas has envisaged. The deficit country will have a part of its sight liabilities funded through replacement by deferred debt of a longer maturity. The lending country can take advantage of holding part of its

---

have shown their preference for interest earning assets such as U.S. securities.

[1]Alternative Systems for . . ., op. cit., p. 26.

international reserves in the form of foreign exchange, rather than gold, thus benefiting from the interest rate and/or gold guarantee that without the plan it would not have had.

What is the primary source of liquidity under this plan? Zolotas claims that the multiple currency standard "renders possible for the alternating deficits of several reserve centers--rather than the persistent deficit of a single country--to become the primary source of liquidity."[1] As many economists tend to discourage deficits Zolotas' position provides an interesting contrast:

> Deficits would be necessary for reserves to circulate rather than come to rest after a quick first round in the tills of surplus countries. Without interchangeable deficits of the reserve centers, it is hardly likely that any kind of reform of the international monetary system would be operative.[2]

The mechanism by which support action takes place under Zolotas' plan may be demonstrated in the following example; it shows the way in which support action is proposed under Zolotas' plan.[3] Suppose that a short-term capital outflow occurs from the U.S., and that regardless of what nationals have withdrawn the funds, they are offered to German banks. Then if the Deutsche Bundesbank (D.B.B.) is concerned with maintaining the fixed exchange rate it

---

[1] Ibid., p. 35.

[2] Ibid., p. 32.

[3] This mechanism would also apply to Bernstein Plan.

can undertake to purchase the dollars offered to the German banks. If the U.S. wishes to reduce its demand liabilities to the D.B.B., she can draw German marks from the IMF. The IMF, in turn, would have to call on the D.B.B. (if it does not have enough marks to meet the U.S. demand), and under credit arrangements lend German marks to the IMF, receiving in exchange non-negotiable instruments evidencing the IMF indebtedness. The IMF would then lend the marks so acquired to the U.S. which could, in turn, use them to buy back in whole or part its liabilities to the D.B.B. The main idea behind such provisions and facilities for the country suffering from capital outflows is to prevent the pursuit of unsound and retaliatory policies which might be destructive to free flow of trade and investments internationally.

What is the IMF supposed to do with deposited currencies? And what form should its operations take? Partial answers have already been given to these questions. It was mentioned before that the Fund would lend the key currencies deposited with it in the respective deficit countries. Thus the Fund invests its acquired funds in the deficit countries; these investments take the form of "special, gold-value guaranteed obligations of the monetary authorities of the investee country and they would also be interest earning."[1] These investments, according to

---

[1] Ibid., p. 27.

Zolotas, could eventually be made negotiable in the capital markets of the investee countries, yet he feels that in view of the "presently insufficient development of the capital markets of the new reserve centers" and the requirements of national sovereignty in domestic monetary policies it would be advisable to make them non-negotiable at the early stages of the implementation of the program.[1]

Several other features of the Zolotas Plan are significant.

First, Zolotas has exhibited full respect for the IMF. In his opinion the role that the IMF now plays should be expanded to include authority "to accept from the monetary authorities of all member countries reserve deposits in convertible currencies other than their own and gold."[2] Furthermore, Zolotas clearly mentions that

> the wide and long experience, the established prestige and the universal character of the Fund provide a most suitable framework for the implementation of evolutionary measures to supplement the present international monetary system.[3]

Second, under the Zolotas Plan gold will continue to be used in the international monetary system; he does not speak about changing the price of gold. Also the present key currencies will continue to function in conjunction with other key currencies. In fact, his multiple

---

[1] Ibid., p. 27.

[2] Ibid., p. 15.

[3] Ibid., p. 40.

currency infrastructure calls for "the creation of international liquidity by attributing to a number of major trading countries the role of reserve centers."[1] Even when additional currencies are accepted as "key currencies," the dollar and the pound would still carry the function of working balances.[2] Essentially Zolotas wants to allow a number of mature economies "to use their own currencies in settling their accounts among themselves as well as with the rest of the world."[3] Hence Zolotas is calling for a liquidity-generating process which, despite the present system, will no longer rely only on one or two countries.[4]

Third, Zolotas is not a radical reformer; he does not introduce a scheme abandoning gold and/or raising its price, and he also appears to be against the establishment of a rival center for reserve creation and regulation. In his opinion, "to establish a rival center for reserve creation and regulation would be a backward step in the process of integrating the world economy."[5]

Fourth, Zolotas does not foresee massive conversions of accumulated key currency balances into claims

---

[1] Ibid., p. 15.

[2] Ibid., p. 34.

[3] Ibid., p. 26.

[4] Ibid., p. 31.

[5] Ibid., p. 40.

on the Fund since it

> would regulate the amount of deposits acceptable from each member country and that ceilings on deposits acceptable from each member country should correspond to a certain percentage of its official key currency balances.[1]

Precisely how this regulation should be achieved and what percentage must be used cannot be seen from Zolotas' articles.

What can be said about Zolotas' plan? Undoubtedly, Zolotas' suggestions should be regarded as one of the most valuable recent plans under consideration for reform of the international monetary system because the proposed scheme is in his view "simply an organic outgrowth of the present institutional setup and secures the continuity of time-tested methods of operation."[2] Furthermore, in linking the creation of liquidity to the deficits of key currency countries--an objectionable point to be discussed at a later point below--the plan provides for across-the-board reserve creation on a selective or general basis.[3] Moreover, already existing key currencies, and even the ones to be established, "would most likely find no difficulty in settling the major part or all of their deficits in their own currencies."[4] The author of the plan must also be given credit for not recommending radical changes

---

[1] Ibid., p. 34.

[2] Ibid., p. 25.

[3] Ibid.

[4] Ibid., p. 26.

with respect to present institutions. It should also be added that the plan provides for future expansion of liquidity and more even distribution of its burden among countries. Last, but certainly not least, Zolotas has proposed a plan which is flexible in both directions: reduction and expansion of international liquidity depending upon the circumstances of the time. For example, he asserts:

> Destruction of liquidity by the Fund can occur whenever it realizes its investments by asking the investee countries to pay in convertible currencies other than their own. This would and should happen in cases where the Fund deems necessary to proceed to a selective or general curtailment of reserves.[1]

Besides, the Fund could lower the limits on key currency deposits it would consider acceptable.[2] If, on the other hand, a need for more international liquidity develops, the IMF is given the authority to create more liquidity through partial deficits of a reserve center. Zolotas is certainly right when he says that unemployment and stagnation are not tolerated in today's economies.[3] He is also right when he asserts that "the expansion of international liquidity is by no means a panacea to world economic problems.[4]

---

[1] Ibid., p. 31.

[2] Ibid., p. 39.

[3] Ibid., p. 37.

[4] Ibid., p. 36.

With all due respect, however, the plan suffers from the following standpoints:

1. The plan is so much based on international cooperation that its reader gets the impression that Zolotas has taken this for granted. However, international cooperation to the extent that Zolotas' plan would require in order to function adequately is not now the rule. It is true that in recent years more international cooperation between financial authorities and central bankers of the world has been achieved, however, "new international agreements are not easily reached."[1] The whole scheme essentially depends on one big "if": If cooperation--and a high degree of it--can be obtained in practice. Zolotas himself realizes this, as he says:

> The acceptance of the scheme by the countries to receive Fund investments and the provision on their part of a gold-value guarantee on the balances invested in them by the Fund are, of course, indispensable.[2]

He does seem, however, to be much more optimistic than many other economists on the prospects of international cooperation.

2. The scheme of a multi-currency standard is based on the premise that other countries would, or should, be content to become reserve centers. This is, however, exactly opposite to IMF experience:

---

[1] Hansen, op. cit., p. 142.

[2] Alternative Systems for . . ., op. cit., p. 16.

> There has been no significant tendency for countries to transfer their reserves to potential new reserve centers; nor has there been any inclination on the part of any country whose currency might be thought of as an alternative reserve currency to welcome or to encourage any such development.[1]

3. Despite the fact that Zolotas has set universalism as one of his objectives, and in spite of the fact that he defines his idea of universalism as sharing by all members of the international community the obligations and benefits deriving from the international monetary reform,[2] he fails to fully take the underdeveloped countries into account and establishes the rule that "the deficits of the reserve centers are the primary source for liquidity expansion in the proposed scheme"[3] thus implicitly excluding the deficits of underdeveloped countries from having any effect on the expansion of international liquidity. Perhaps he is concerned with non-inflationary expansion of the need for liquidity, and on this basis excludes the deficits of underdeveloped countries from consideration as a source of international liquidity. Even if he has a point in thinking this way, he should realize that he has not allocated a fair share to the underdeveloped countries. It is surprising that in the last section of one of his

---

[1] International Monetary Fund, 1965 Annual Report (Washington, D. C.), p. 14.

[2] Alternative Systems for . . ., op. cit., p. 17.

[3] Ibid., p. 31.

articles devoted to the "international Liquidity and the Developing Countries"[1] he fully realized their need, emphatically stating that "the success of the development efforts of lower-income countries is critically dependent on the level and growth rate of world reserves,"[2] yet when he discussed the sources of international liquidity,[3] he completely dismissed underdeveloped countries.

Zolotas himself criticizes his own plan by saying that

> Adding to the reserves of the countries with the highest per capita income is grossly inequitable to the rest of the countries which are left to earn through balance of payments surpluses such reserves as they feel they need for their economies.

One may notice that this criticism is very much in line with the previous one.

4. Whether or not the best means for the specific interpretation and implementation of the general rules of conduct is "multilateral surveillance" is a matter of value judgment and perhaps subject to improbable success. This may create some discipline problems.

5. Under the plan the funds that the IMF acquires come from countries having capital inflows rather than from credit creation on the initiative of the IMF. Thus the role assigned to the IMF is not one of a central banker

---

[1] Ibid., pp. 43-45.

[2] Ibid., p. 43.

[3] Ibid., p. 31.

in the full sense of the word, but only that of an intermediary. That is, a central bank can create credits on its own initiative and authority without having to borrow from commercial banks; the authority proposed for the IMF is not that of a credit creation. More specifically, the IMF is assigned a role of "credit transferer" rather than "credit creator" in that all it is assigned to do (under the plan) is to borrow international means of payments from the central banks in the capital receiving countries and to pass them on to the financial authorities of central banks stormed by the pressure of capital outflows.

Finally, Zolotas asserts that lower income countries "maintain a high ratio of key currencies to gold in their total reserves," without providing evidence for this assertion and without stating what he means by "high." To evaluate the validity of this assertion the following test was applied. A sample of 22 countries outside the group of eleven were chosen by random from the International Financial Statistics. The list of these countries can be seen in Table 17 in Chapter VII below. As an example, upon taking the percentage ratio of their foreign exchange to their gold holdings as of the end of 1966 it was found that not all of them maintain a high ratio of foreign exchange to gold in their total reserves if "high" be defined as more than one hundred per cent. This can be seen from Table 5 which shows that at least six out of

twenty-two countries did not have high ratios. The same test was applied to the selected countries for every other year starting from 1951 to 1965, and the same conclusion was observed.

TABLE 5

FREQUENCY DISTRIBUTION OF THE PERCENTAGE RATIO OF FOREIGN EXCHANGE TO GOLD HOLDINGS FOR SELECTED COUNTRIES AS OF THE END OF 1966

Percentage Ratio	Frequency
Less than 100	6 Countries
Between 100 to 200	5 Countries
Between 200 to 300	3 Countries
Between 300 to 400	2 Countries
Between 400 to 600	0 Country
Between 700 to 800	1 Country
Between 800 to 900	1 Country
Between 900 to 1000	1 Country
More than 1000	3 Countries

Source: Derived on the basis of data in Table 17, Chapter VII below.

In connection with the Zolotas Plan, it must be pointed out that his plan is very similar to that of Maudling in that both propose the establishment of a new department or institution within the IMF designed to take the responsibility of transferring excess holdings of

currencies from countries having capital inflows to those suffering from capital outflows. According to Maudling a mutual currency account must be established within the IMF, thus enabling the surplus countries to continue to acquire the currencies of other countries. Claims in the IMF would then be submitted in the form of a mutual-currency account. The plan does not precisely describe the manner in which mutual currency accounts would be drawn upon and the purposes behind their drawings; it is reasonably clear, however, that should a surplus country run a deficit in its balance of payments, it would have the right to draw upon the account.

Maudling readily admits that he is not putting forward "any cut and dried plan."[1] But speaking of different proposals for the reform of the international monetary system, he has the following to say:

> I am myself, moreover, attracted by the thought that we might develop a system of cooperation between the leading trading countries in the form of a mutual currency account in the Fund. By this, I have in mind an arrangement of a multi-lateral character under which countries could continue to acquire the currency of another country which was temporarily surplus in the markets and use it to establish claims on a mutual currency account which they could themselves use when their situations were reversed. Such claims on the account would attract the guarantee that such a system would enable world liquidity to be expanded without additional strains on the reserve currencies or avoidable setbacks to their economic growth, and at the same time without requiring countries whose

---

[1] International Monetary Fund, Summary Proceedings, Annual Meeting (Washington, D. C., 1962), p. 68.

> currencies were temporarily strong to accumulate larger holdings of weaker currencies than they would find tolerable.[1]

Thus Zolotas' and Maudling's plans have one feature in common: surplus countries should lend to the IMF, providing in turn reserves to the deficit countries through the reserves so created. One can also see that Hansen's plan is essentially an elaboration of the Zolotas Plan.

According to the Joint Economic Committee of the U.S. Congress steps are being taken toward the establishment of a multiple currency reserve system. In May of 1962 Robert Roosa, then Under Secretary of the United States Treasury, announced that such steps have been implemented by the U.S. through acceptance of the currencies of various countries as part of its international reserves.[2]

> Over the past 14 months the United States has, for the first time since the later 1930's, entered into foreign exchange transactions for monetary purposes, as distinct from the more or less routine handling of foreign exchange to meet the Government's operating needs abroad. The Treasury began limited operations in March 1961, acting through the Federal Reserve Bank of New York as its fiscal agent. In February of this year the Federal Reserve System announced its decision to enter the exchange markets for its own account.[3]

According to Roosa the advantage of a system of keeping

---

[1] Ibid., pp. 67-68.

[2] Remarks of Robert Roosa at the monetary conference of the American Bankers Association, Rome, Italy, May 17, reprinted in "The Beginning of a New Policy Banking and the Balance of Payments Assuring the Free World's Liquidity," Factors Affecting the United States Balance of Payments, op. cit., pp. 327-351.

[3] Ibid., p. 327.

currencies of other countries is not only that it limits temporary disturbances in the exchange market but that it also has the extreme advantage of using existing institutions and practices. "Within such a system the patterns of reference are known to all; no one will be asked to do things that fall outside the realm of his experience."[1]

It must be borne in mind that Roosa, despite the similarity of his proposal to those of Zolotas and Maudling, does not want to suggest a gold guarantee for dollars: he maintained that confidence in the dollar must be beyond doubt or suspicion (a position not so surprising from a U.S. official authority). Indeed, he tends to think that a gold guarantee for the dollar is not only unnecessary but harmful, worthless, and cumbersome.[2] During 1962, the United States took further steps toward bilateral "swap" credit agreements with a number of countries such as France, West Germany, England, Switzerland, Canada, Belgium, and the Netherlands.[3]

In The Beginning of a New Policy Roosa makes a statement which applies not only to his views but also to those of Zolotas and Maudling--namely, the net effect of the U.S. holdings of foreign currencies would be "to

---

[1] Ibid., p. 332.

[2] Ibid., pp. 343-4.

[3] Charles A. Coombs, "Treasury and Federal Reserve Foreign Exchange Operations," Ibid., pp. 355-369.

multilateralize a part of the role performed now by the two key currencies, within a framework that would place great stress on still further cooperation among monetary authorities."[1] Despite Roosa's contention, swap currency agreements would be more bilateral than multilateral arrangements. Thus Roosa's "multiple currency reserves," Bernstein's "reserve unit," Lutz's "multiple currency standard," Maudling's "mutual currency account," and Zolotas' "multi-currency international standard" (and even Hansen's plan) all have one feature in common--to rely on more currencies than dollars and pounds.

Other Proposals

Posthuma's Plan

S. Posthuma, a director of the Netherlands Central Bank, proposes that surplus countries should reach an understanding to hold only a certain percentage (60%) of their international reserves in gold and the rest in key currencies.[2] His proposal is implicitly concerned with the leading gold holding countries and since the objective is to provide a means of creating more international liquidity, it would be of significance for the six large gold holding countries: Switzerland, Netherlands, Belgium,

---

[1] Remarks of Robert Roosa . . ., op. cit., p. 331.

[2] S. Posthuma, "The International Monetary System," in Banco Nationale del Lavoro Quarterly Review, No. 66, September, 1963. Unless otherwise mentioned, this article will be the main source upon which this section is based.

West Germany, France, and Italy. The effect of his proposal upon the U.S. and the U.K. will be referred to in a later part of this section. The following two tables can be helpful in providing a better understanding of the nature of Posthuma's plan. As can be seen from these tables gold holding as a percentage of the total reserve of leading gold holding countries in most cases, with the exception of W. Germany, has been over 60 per cent in 1966, while foreign exchange holding as a percentage of total reserves for the leading gold holding countries has been less than 40 per cent. What Posthuma suggests is, in effect, an agreement among these countries to take a lower percentage ratio of gold and a higher percentage ratio of foreign exchange to total reserves. In his opinion, this can, if successfully achieved, reduce the conversion demands for gold and can also increase the demand for foreign exchange. This "if" will further be discussed after the substance of his program has been presented.

Why does Posthuma limit himself only to the six Continental European Countries mentioned above? Because, first, these are the only countries, other than the key currency countries, which hold anything approaching the 60 per cent ratio of gold to total international reserves. Second, he regards limiting of the proposal to the six countries mentioned above to be the most feasible and the simplest application of his proposal.

What is required to put his proposal into effect? The six gold-holding countries will have to either stop accumulating gold, sell some of their gold for foreign exchange, or both. On the other hand, the proposal requires that the key currency countries start to increase their foreign exchange from their present low percentages to something approaching 40 per cent. Further comments on the effects of the proposal upon key currency countries will be presented later. At this point, it must be noted that this proposal may be gradually put into action rather than being immediately effective.

If Posthuma's proposal were to be applied to the leading gold holding countries, it would require the foreign exchange purchases for the year 1966 noted in the table on the following page.

Once required purchases under Posthuma's proposal are obtained, they may be compared with the actual gold and foreign exchange holdings of these countries. This comparison has been made in Table 7. This table clearly shows that if Posthuma's proposal of holding 60 per cent of total international reserves in gold and 40 per cent of total international reserves in foreign exchange were applied to the year 1966 and then compared with the actual holdings of the leading gold-holding countries, W. Germany and Italy would still deserve to get more gold, and the U.S., France, and Switzerland would be required to relinquish extra gold (extra being defined under Posthuma's

plan as the positive difference between their actual holdings and their required holdings). The U.S., France, and Switzerland would thus have acquired more foreign exchange in order to meet Posthuma's requirement, an interesting situation which will be discussed later.

TABLE 6

FOREIGN EXCHANGE PURCHASES REQUIRED UNDER POSTHUMA'S PLAN FOR THE YEAR 1966
(in Millions of U.S. Dollars)

(1) Country	(2) Total Reserves in 1966	(3) 40% of Total Reserves to be held in foreign exchange	(4) 60% of total Reserves to be held in gold
United States	14881	5952	8929
United Kingdom	3100	1240	1860
Belgium	2320	928	1392
France	6733	2693	4040
West Germany	8028	3211	4817
Italy	4911	1964	2947
Netherlands	2448	979	1469
Switzerland	3324	1329	1995
Total	45745	18296	27449

Source: Data in column 2 are taken from the last column of Table 15, Chapter VII below; data in columns 3 and 4 are personally computed.

The net effect of the application of the Posthuma Plan upon the positions of the U.S. and the U.K. is not, however, as simple as the above paragraph might suggest. As shown in Table 7, the actual gold holding of all selected countries amounted to $33215 million (U.S.)

TABLE 7

COMPARISON OF THE REQUIRED PURCHASES OF GOLD AND FOREIGN EXCHANGE UNDER POSTHUMA'S PLAN AND THE ACTUAL GOLD AND FOREIGN EXCHANGE HOLDINGS OF SELECTED COUNTRIES, 1966
(in Millions of U.S. Dollars)

Country	Gold			Foreign Exchange		
	(1) Actual Holdings in 1966	(2) Required Holdings Under Posthuma's Plan	(3) Difference: (1) minus (2)	(4) Actual Holdings in 1966	(5) Required Holdings Under Posthuma's Plan	(6) Difference: (4) minus (5)
United States	13235	8929	4306	1321	5952	-4631
United Kingdom	1940	1860	80	1159	1240	- 81
Belgium	1525	1392	133	428	928	- 500
France	5238	4040	1198	507	2693	-2186
W. Germany	4292	4817	- 525	2479	3211	- 732
Italy	2414	2947	- 533	1612	1964	- 352
Netherlands	1730	1469	261	305	979	- 674
Switzerland	2841	1995	846	483	1329	- 846
Total	33215	27449	5766	8294	18296	10002

Source: Data in columns (1) and (4) are taken from IMF, International Financial Statistics, Vol. 20, No. 8 (Washington, D. C., August 1967), pp. 15-17; data in columns (2) and (5) are taken from Table 6 above; data in columns (3) and (6) are personal computations.

dollars in 1966 (total of column (1) in Table 7); under Posthuma's prescription, if the selected countries agreed to keep only 60 per cent of their international reserves in gold, they would have needed only $27449 million worth of gold (total of column (2) in Table 7). The difference between the total actual gold holdings and the total required gold holdings thus amounts to $5766 million (= 33215 - 27449). On the other hand, the difference between total actual foreign exchange holdings and the total required foreign exchange holdings amounts to $10002 million (= 18296 - 8294). Essentially this is the crux of what Posthuma has suggested: If the leading gold holding countries were to agree that each would hold 60 per cent of its international reserves in gold and the rest in foreign exchange, international liquidity would then be increased by two means: a) the release of gold, and b) more demand for foreign exchange and reduction of the pressure on U.S. dollars and the pound. However, to derive the net demand for foreign exchange from the standpoint of the U.S. and the U.K., their actual holdings of foreign exchange should be deducted from the totals. Thus for the year 1966, one should deduct 1321 + 1159 = 2480 from 8294 (the total of actual foreign exchange holding in Table 7). This would indicate that countries other than the U.S. and the U.K. would have a demand for 8294 - 2480 = $5814 million more of foreign exchange. Thus the over-all

effect of application of the Posthuma Plan is favorable to the U.S. and the U.K. as it increases the demand for their key currencies, despite the fact that each of these two key currency countries would have to buy foreign exchange from other selected countries to meet the requirements of the plan.[1] The plan, therefore, could potentially involve a significant increase in gold release to the benefit of international liquidity and a considerable increase in the demand for dollars and sterling; by so doing the plan could actually transform what is now regarded to be a dollar glut (excess dollars) into required foreign exchange holdings. Thus a rigid control of the gold and foreign exchange ratios would permit an expansion of the international means of settlement as viewed in terms of gold and foreign exchange. Hence, Posthuma's plan calls for and results in the expansion of international liquidity without demanding a return to full gold-standard, a rise in the price of gold, establishment of a new international credit creating institution, or an international bank. Undoubtedly

---

[1]There is no way of knowing the net and exact effect of the application of Posthuma's plan upon the U.S. and the U.K. individually, since part of U.S. demand for foreign exchange may be met by British pounds in addition to the currency of other members, and by the same token part of the demand of the U.K. for foreign exchange may be met by U.S. dollars, in addition to the currency of other members. Posthuma has not specifically stated what the consequences would be in this event. The calculations computed for the year 1966 clearly show that the net effect of the application of Posthuma's plan upon the U.S. dollar and the British pound cannot be measured accurately, despite the ostensible simplicity of the proposal itself.

if Posthuma's plan were agreeable to the participating countries and these participants would only be composed of leading gold-holding countries and would not include the underdeveloped countries, it could make contributions toward a mutual sharing of the possible risks in terms of pressures on the key currency countries' monetary units.

Furthermore, if implemented, the proposal might give a tremendous impetus to the development of financial integration not only between the Common Market members but also between them, the U.S., and the United Kingdom. Moreover, if the program were successful, the U.S. and the U.K. would be left with a supply of foreign exchange equal to 40 per cent of their international reserves which would potentially make them more immune to speculative movements of any foreseeable magnitudes, hence more stability could be provided for the international monetary system.

Besides, international credit across the leading countries would be provided. Because, as Machlup has mentioned:

> After all, the willingness of a central bank to allow its monetary reserves to grow by an accumulation of claims against a particular country implies its willingness to grant increasing amounts of "credit" to the central bank of that country.[1]

In addition, when international reserves are held in the form of gold, the holding country would have to

---

[1]Machlup, "Plans for Reform . . .," op. cit., p. 30.

forego any interest rate, since there is no interest paid on gold holdings of one country by others. There is the possibility of taking advantage of reserve holdings which are in the form of foreign exchange and foreign government securities, such as the Roosa bonds. Thus, if Posthuma's plan were accomplished, some countries could add their earnings from the interest rates on part of their international reserves which would otherwise have been impossible if they held only gold or substantial gold.

Posthuma's proposal does not require an indefinite waiting period before the individual country may act; rather, it calls for immediate specific joint action. This, it is possible to assume, may add to the difficulties of implementation of his program.

Focusing attention on the undesirable aspects and disadvantages of Posthuma's plan, one may consider the following points.

First, this plan does not make any specific indication as to how countries can be induced to hold less gold and more foreign exchange balances in their international reserves.

Seoond, despite the significant short run increase in international liquidity that the proposal could potentially create, it is doubtful if the need for increased international liquidity implicit in a growing world economy and a growing volume of international trade can be met on a

long run basis through implementation of this plan.

Third, the 60 per cent gold ratio would bring about an increase in international liquidity under the condition that the U.K. and the U.S. could successfully place their government securities in European capital markets or with foreign governments and central banks in order to acquire the needed foreign exchange in the event that they are unwilling to give up more gold. Whether the Continental European countries are prepared to receive vast amounts of U.S. and U.K. securities in their capital markets remains questionable.

Fourth, Posthuma's prescribed uniform ratio of gold to total international reserves evidently requires surveillance over the reserve composition of each participating country. But are these countries really willing to agree to any such regimentation?

Fifth, the reader of the Posthuma Plan gets the impression that underlying his view is the concept that fluctuations in international reserves affect domestic price stability. This may be true with respect to W. Germany and possibly some other countries, but no longer need it necessarily be true. Today in some countries central bank authorities can more effectively control domestic price stability through credit controls and other devices (such as fiscal policy); it might be within their powers to isolate the volume of domestic credit and the domestic

price level from the impact of fluctuations in foreign reserves.

Sixth and more important than the above criticism is that there is no necessity to predetermine the desired amount of international reserves: individual countries decide this on the basis of what they believe they need. A report of the IMF states that "many countries may state that their reserves are too low or wish that they might be larger, without being prepared to take the steps necessary to strengthen them."[1]

> The adequacy of reserves, both for the world as a whole and for individual countries, can be judged only in a broad international context. For example, a given level of reserves will have one degree of adequacy when economic conditions between countries are in reasonable balance and when exchange rates are appropriate. If these conditions are not satisfied, the same reserves will have a different degree of adequacy. Similarly, from the point of view of any one country, reserves that may be adequate if the country is following a program of development with stability may appear totally inadequate when it has an unbalanced budget or active credit inflation. No amount of reserves is adequate to finance a continuous deficit in the balance of payments resulting from excessive spending or insufficient revenue. In these cases, the immediate task is clearly to adopt fiscal and monetary policies that will restore external and internal equilibrium.[2]

Seventh, not only may the agreement between the leading gold holding countries not be easily achieved, the proposal requires new monetary machinery to be devised to

---

[1]International Monetary Fund, International Reserves and Liquidity (Washington, D. C., August 15, 1958), p. 94.

[2]Ibid., pp. 93-94.

facilitate internationalization of the free world's capital markets. Unless this machinery is revised, the proposal is likely to remain unworkable. Furthermore, the proposal may face other practical problems from the standpoint of feasibility. For example, it may prove difficult to persuade the European parliaments or even the U.S. Congress to give unilateral guarantees to their currencies. In practice it would probably be easier to achieve the same result through the IMF. Also the proposal, as already mentioned, calls for a formal commitment to maintain an established gold and currency mix. This, in the opinion of Williamson, is probably essential if a multiple-key currency proposal is to increase liquidity.[1]

Finally the program completely dismisses the underdeveloped countries, and remains silent on how these countries would be affected by the new proposal. Presumably Posthuma thinks that the addition to total international liquidity can favorably affect the underdeveloped countries.

Hart, Kaldor, and Tinbergen's Plan.

In contrast to many authors who have focused their attention on either the problem of inadequacy of international reserves or balance of payments adjustment, Hart, Kaldor, and Tinbergen have broadened their outlook with consideration of the problem of commodity price

---

[1]John H. Williamson, "Liquidity and the Multiple Key Currency Proposal," The American Economic Review, vol. LIII (June, 1963), pp. 430-431.

stabilization. Thus they present a plan[1] which aims at solving (with one stroke) both the problem of international liquidity and the problem of commodity price stabilization. This proposal is therefore of a more comprehensive nature than many other proposals of the 1960's.

Long ago Benjamin Graham in Storage and Stability (1937) and World Commodities and World Currency (1944) paid attention to the problem of commodity price fluctuations and its effects upon various countries. Thus consideration of the role of storage of commodities, its effect upon international economic stability, and reliance on open market operations is not unique to the Hart, Kaldor, and Tinbergen Plan; this plan can well be considered a modified or modern version of Graham's earlier discussions.[2]

The plan does not propose a change in the price of gold or in familiar institutions. With full respect for the present positions of gold, the dollar, the pound, and

---

[1]Albert G. Hart, Nicholas Kaldor, and Jan Tinbergen, The Case for an International Commodity Reserve Currency. A Memorandum submitted to the United Nations Conference on Trade and Development, Geneva, March 28 to June 15, 1964.

[2]Even in the 1960's, Hart, Kaldor, and Tinbergen are not the only economists paying attention to the role of "open market operations" in the economy. See, for example, Fritz Machlup, "The Cloakroom Rule of International Reserves: Reserve Creation and Resources Transfer," The Quarterly Journal of Economics, Vol. LXXIX, No. 3 (August 1965), pp. 337-355; see especially p. 351 for Machlup's attention to the role of open market operations.

the like, the plan requires that the IMF establish an international currency of its own (bancor) distinct from its present drawing rights which are denominated in the currency of individual nations. A further requirement of the plan is that member countries accept the bancors issued by the IMF on equal terms with gold. Under the scheme central bankers are permitted to hold bancor balances.

What quantity of bancors should be created initially? The plan requires an initial issue of $30 billion bancors to be exchanged with $5 billion of the obligations of member countries, $5 billion worth of gold, and a $20 billion bundle of thirty or so primary commodities suitable for storage. Such commodities, according to the plan, should be bought at a "declared value" to be computed for each year on the basis of their average world price in the two preceding years. If the market price of a commodity within the bundle rises by fifty per cent or more over its declared value for any reason (as in the case of sugar in 1962), the plan provides that such a commodity would be excluded from the bundle.

How are the commodities to be purchased? The plan provides that commodities must be purchased through open market operations and from the stocks held by member countries. The IMF should, according to the plan, set up a marketing organization of its own to be engaged in the

sale and purchase operations of various commodities accepted in the bundle. The objective of these open market operations is not to prevent or eliminate relative price movements of these commodities with respect to each other, but rather to stabilize the general price index of commodities and to moderate their fluctuations.

The process of operation that Hart, Kaldor, and Tinbergen have assigned to the IMF is that of an intelligent trader. The IMF should, so they argue, issue new bancors--or use already issued ones--to finance the purchase of commodities and add them to its bundle whenever their market price is below their declared value. Further purchases of commodities and further addition to their storage should cease once the market prices of commodities reached their declared value. On the other hand, when the market prices of commodities rise above their declared value, the IMF would release part of its commodity stocks.

Thus under this plan, the Fund would provoke two distinct effects in its open market operations. First, the Fund would have a control or self-balancing mechanism in that there would be a release of stocks when the market price of commodities rises above their declared value and a storage of stocks when their prices fall. Second, by so doing, the IMF automatically injects bancor income into countries selling commodities when their price is below the declared value and withdraws bancors when prices of

selected commodities are above the declared value. As a result of these operations, a decrease in international liquidity would occur when world supply of primary products rises through the release of stocks, and the rise in bancor income of primary producer countries would be limited. By the same token, the volume of international liquidity would increase when world primary products fall through the injection of additional bancor incomes to the countries as a payment for whatever primary products they sell. The plan attempts to solve the problems of international liquidity and changes in the price of primary commodities through a reliance on a market mechanism affected by free forces of supply and demand. There are, however, reservations to this method which will be made below after the substance of the plan is analyzed.

Another related question is: "How is the bancor to be used?" A partial answer to this question is implicit in the above paragraph; the IMF is to use bancors for making payments on the purchase of primary commodities. This would add not only to the store of international liquidity, but would also curb the destabilizing effects of the price changes of the primary commodities for the developing countries. There is still the question of how the member countries should use bancor incomes. Hart, Kaldor, and Tinbergen assert that newly acquired bancors are part of the international reserves of a country and

can be used to pay off debts incurred in international transactions. To make the bancor work, supporters of the plan have held that the creditor countries should help other countries by converting their holdings of key currency into gold. They can achieve this objective by reducing the rate of interest paid to foreign holders. Citing a figure of $22 billion as official holdings of sterling and dollars in 1964 (the date the plan was written), the authors of the plan assert that should such a conversion take place, $22 billion dollars of the newly created $30 billion dollars will be absorbed if the IMF uses all of these for the purchase of primary storable commodities, thus leaving the international economy with a net increase of $8 billion.

What if the creditor countries do not choose to take bancors? The answer provided by Hart, Kaldor, and Tinbergen--which incidentally places most of the burden on the key currency countries--is that they should freeze their bancors. This freeze, so their argument runs, would have the same effect on international liquidity as if the sterling and the dollar holdings have been converted into bancors.

What if the countries do not choose to make transactions with the Fund in terms of buying and selling commodities? There is no answer provided to this, but it is reasonably clear that the authors of the plan have thought

countries would prefer to engage in transactions with the Fund, as in a period of falling prices they can get some bancor income and prevent a loss due to inappropriate price reductions, and in a period of rising prices above the declared value they can buy cheaper from the Fund. Not too much attention is paid to where (specifically in what country or countries) the commodities should be stored, and what the effect of transportation costs on the international movements of these commodities would be.

How urgently should the target of adding $30 billion bancors be sought? Hart, Kaldor, and Tinbergen assert that this would depend on how fast the $20 billion bundle of commodities can be bought and what the direction of movement in their price is. Ostensibly, if commodity prices were falling--as was the case from 1955 to 1962 according to Hart, Kaldor, and Tinbergen--the IMF can more easily engage in a rapid accumulation of the $20 billion bundle target. Depending on how fast the commodities can be bought a period of five years could be established.

Who is going to engage in IMF transactions with the member countries in terms of buying or selling various commodities? The authors have suggested that reliance could be placed upon private traders who would engage in open market operations and would work according to a general rule of action: to buy primary commodities in the open market whenever the market price was less than the

declared value and to sell when prices were more than the declared value within a margin to be specified officially for selling and buying parity rates. The activities of these IMF agents in different primary producing countries would be further supplemented by IMF marketing organization in the industrial commodity markets.

Basic to the analysis of this plan are two implicit assumptions. First, the continued growth of the industrial countries depends on an increasing supply of primary commodities. Second, the significant factor in the progress of developing countries is a smooth and adequate supply of foreign exchange. Both of these assumptions can be subject to challenge. On the one hand, at least some industrial countries can secure their needed primary products from within their own economies, and to the extent that they do (neglecting the substitutes that they may have or may develop for primary products) they do not have to engage effectively in primary product transactions with the IMF or with any other country. On the other hand, the acquisition of foreign exchange is not the all-important factor in the progress of developing countries. At best, the same results can be achieved through a domestic stabilization fund to be set to engage in the same type of transactions and/or through compensatory fiscal and monetary policies.

What can be said about this scheme? To begin with it is quite clear that the authors have had a broader

outlook than most economists dealing with the international liquidity problem in that they have included the undesirable effects of fluctuation of commodity price changes which do undoubtedly affect developing countries; they deserve credit for this. But precisely how much more complex their plan becomes because of this very much broader outlook cannot be measured. It must also be recalled that Hart, Kaldor, and Tinbergen's attention to the price fluctuations of primary products is not a problem that other economists have been unaware of. It is only that the scale of preference and individual value judgments of economists vary; some economists have thus preferred not to mix up the two problems of adequate international liquidity and commodity price stabilization.

The primary characteristic of this plan, apart from the courage of its authors in attempting to deal with the two problems simultaneously, is that it appears to be "self-balancing." That is, whenever an excess supply of primary commodities occurs to the extent that they would seem to bring the price below the value declared by the IMF, the excess supply could be bought and paid for by the IMF. Since the bancors thus acquired are a part of the international reserves of each country, they can be used either to pay off past debt or to buy manufactured goods. In any case the bancor-receiving country would experience either an export surplus or added income which,

if not frozen by the central banks, could be used to accelerate expansion and growth. Their further expansion would require more primary products, which if not obtained domestically as the authors seem to have assumed, could be drawn from the IMF stocks. This process of adjustment has an advantage over the current one in that it does not necessitate prolonged periods of depressed prices, a reduction in employment and output of the primary producing countries, and decline in industrial export.

The problem of commodity price fluctuations and its acute effects on the earnings of countries, especially developing ones, is undoubtedly one of the economic problems of our time. A group of developing countries[1] in their Memorandum submitted to the U.N. Conference on Trade and Development have specified their concern with the problem of international liquidity and in this context have said: "During the period of relative export price stability from 1960 to 1965, more than half of the developing countries for which data are available were actually building up their reserves."[2]

Hart, Kaldor, and Tinbergen readily admit that the

---

[1]Argentina, Brazil, Cameron, Ceylon, Congo (Democratic Republic of), Ecuador, El Salvador, Ghana, India, Kuwait, Lebanon, Mali, Mexico, Morocco, Peru, Republic of Korea, Trinidad and Tobago, Tunisia, Egypt, United Republic of Tanzania, and Yugoslavia.

[2]Memorandum on International Liquidity, op. cit., p. 8.

process of industrialization requires, among other things, technical know-how and entrepreneurial ability in addition to human, capital, and natural resources. Yet, they believe the experience of some countries such as Mexico, Brazil, and Japan can be obtained fairly rapidly when the other underlying conditions (not spelled out in the plan) for industrial development are favorable. They hold industrialization depends primarily on effective demand; yet, fluctuations in the income of primary producing countries not only create conditions unfavorable for their growth but also waste technological improvements in primary products. Furthermore, the authors seem to have fears concerning the capability of advanced countries in terms of following full employment programs, yet their competence in the area of fiscal and monetary policy would negate this conclusion. In essence they have aimed at an adequate amount of international liquidity but in conjunction with price stability of primary products, full employment and growth in advanced countries, and industrialization of advanced countries.

Despite the fact that Hart, Kaldor, and Tinbergen have paid more attention to primary product prices, they appear to hold that the one limiting factor and the important constraint in the way of industrialization is lack of effective demand, which in this context, would mean bancor incomes or foreign exchange.

If this were what they believed, have they not underestimated the great and perhaps innumerable obstacles to progress--many of which are non-economic in nature? From their emphasis one gets the impression that in their estimation labor, know-how, and materials can easily be acquired or are amply available, but the only important element badly lacking for industrialization is foreign exchange.

Adroit salesmanship and great intelligence is required from the IMF under the plan. Moreover, new international arrangements are needed in order to operate the program; these cannot be easily reached. This, of course, is not a great disadvantage, yet even if the plan did result in what it was meant to achieve, one can see that the same goals could be accomplished through more practical and less complicated schemes such as preferential trade treatment for developing countries or support prices. Furthermore, the American farm program has provided us with the experience that the idea of stock piling may prove expensive, wasteful, and perhaps frustrating. These are, however, minor points relative to the scheme.

A significant economic shortcoming of the plan is that it professes to achieve the right amount of international liquidity. Hart, Kaldor, and Tinbergen assumed that the amount of liquidity added to the international liquidity in pursuit of a policy of thirty primary

products' price stability would be the "right" amount. This assumption is subject to argument and challenge. If a price index of thirty primary products remains relatively stable over five years (or less or more), would one be justified in deriving the conclusion that international liquidity is also adequate? Should adequacy of international reserves be judged in terms of fluctuations in the price of primary products? Or would other factors such as the growth of world production, the increasing volume of international trade, and growing world needs have some bearing on the subject? The need for international liquidity is by no means dependent on any "one" factor such as price fluctuations of some thirty primary products. One can hardly doubt that the two are interrelated, but this should not be taken to mean that international liquidity is a function of primary products price fluctuations.

This plan also claims that historically a period of slowdown in the rate of industrial growth has often been associated with a preceding period of declining raw material prices. They have argued in their plan that rapid industrial growth is possible when the supplies of primary products are rising. Such statements are subject to doubt; at best, reliable econometric studies are needed for their proof.

CHAPTER V

OFFICIAL AND SEMI-OFFICIAL POSITIONS

In any review of the plans for reform of the international monetary system one needs to examine the official assertions of the IMF for at least two reasons: (1) the content of such assertions may involve alternative suggestions and may well be interesting from a theoretical standpoint regardless of the official authorities who adhere to them; (2) since they come from the people actually in contact with the international monetary system on a regular basis, they may be more practical. Discussion of the IMF's position on the international monetary system therefore deserves a thorough examination.

It must also be pointed out that the IMF realizes that the examination of the problem of international liquidity is not an easy task; yet despite the difficulties of reaching an agreement on this subject, the IMF asserts that its analysis permits the conclusion that "it will be necessary to continue and possibly to broaden international action directed toward the creation of international liquidity."[1]

---

[1] 1964 Annual Report, op. cit., p. 29.

In order to avoid misinterpretation, intensive use will be made of quotations from the various publications of the IMF. The objective of this method is to provide the reader access to the exact terminology used by the IMF. The Joint Economic Committee of the U.S. Congress has also made comments on the international monetary problem which have a semi-official nature; accordingly, this position will also be presented.

An Analysis of the Fund's Position

One may go back a few years and see, for instance, that in response to a request by the Economic and Social Council of the United Nations, the Fund published in its Staff Papers of 1953 an article entitled "The Adequacy of Monetary Reserves." The article concluded that the then existing monetary reserves were adequate.

Again, in 1958, at the request of several member governments, the Fund published a staff study, International Reserves and Liquidity. This study presented the conclusion that the Fund's sources were unlikely to be adequate in terms of meeting the contingency calls which might be made on them, and greatly affected the general quota increase of the IMF in 1959.

At the Annual Meeting of the Board of Governors in Washington, D. C. in September of 1963, concern over the problem of international liquidity was once indicated in a statement made by the Managing Director that "the

Fund would intensify its studies of international liquidity and related questions and many Governors expressed keen interest in the subject and in the proposed studies."[1] Furthermore, the Annual Report of the IMF in 1963 included a chapter on the topic of international reserves and liquidity. It was concluded that the problem and the structure of the international liquidity required continued close attention.[2]

The Annual Report of the IMF in 1964 made the comment that:

> Prospective adequacy depends to a very great extent on such unpredictable factors as the presence, at some future time, of inflationary or contractionary tendencies in the world economy, and the distribution by countries of reserves and of payments deficits and surpluses at that time.[3]

The general assertion, however, was that continued international action was necessary.[4] Thus despite the continuing concern which originated in 1953, it is really the 1964 Annual Report which began to undertake a more serious look into the problem.[5] This was the beginning of a revision

---

[1] Ibid., p. 25.

[2] IMF, 1963 Annual Report (Washington, D. C.), p. 52.

[3] 1964 Annual Report, op. cit., p. 29.

[4] See footnote on p. above.

[5] This report and the 1965 report which complements it, unless otherwise mentioned, will be the basic sources for the materials presented in the following sections of this chapter.

in the Fund's former long-standing position that international reserves were adequate.[1] In view of this background analysis of the Fund's position will now be undertaken.

Objectives of International Money Management

A starting point for discussion of the official views of the IMF is the aims of the Fund as stated in the following:

> Practically speaking, the aim of international monetary management must be the achievement of balance with the least possible sacrifice of the generally accepted objectives of economic policy, including full employment, an adequate and sustained rate of growth, maintenance of reasonable price stability, and the maximum degree of freedom in current international transactions. It is also important that distortions in the international flow of capital and financing be avoided.[2]

The Fund is pragmatic in realizing that at the present time many countries regard their domestic employment and growth important enough not to tolerate any major decline due to balance of payment difficulties and/or lack of adequate international means of payment. It is, however, necessary to point out that there are sometimes certain difficulties in terms of the possibility of conflict among certain policy objectives. To what extent one can combine

---

[1]The Fund's idea that the then general level of international liquidity was broadly satisfactory and adequate does not necessarily mean that the supply of each type of liquidity as well as its distribution among countries were equally satisfactory. See ibid., p. 29.

[2]1965 Annual Report, op. cit., p. 10.

all the objectives mentioned in the above quotation remains an open issue. In the event of conflict, a certain trade-off of the goals of the adopted economic policies must be achieved, and countries necessarily have different priorities in this respect. Therefore, the question of how well the system has served to attain these objectives from the standpoint of the IMF must first be examined.

The Fund's Appraisal of the System

The IMF asserts that the development of the world economy as a whole and of national economies individually cannot be attributed to any single factor such as the international monetary system.[1] By and large, in the opinion of the Fund, the industrial countries have had a "very high degree of success" in combating structural unemployment; the large pockets of unemployment which existed in most European countries were largely absorbed between 1950 and 1964. With respect to price stability, however, the inflationary pressures "continued to be felt," and "the cost of living over the same period rose by an average of 2.5 per cent per annum."[2]

The developing countries, however, have been hampered by structural problems and in view of the unsatisfactory development of their export earnings have

---

[1] Ibid., p. 11.

[2] Ibid.

realized that simultaneous achievement of the goals of rapid growth and internal and external stability is difficult. As a result they have resorted not only to exchange rate depreciations but also to restrictions on imports and on their payments. Furthermore, their internal imbalances have interfered with the expansion of their economies.[1]

Some members of the Fund have made "great progress" in the removal of barriers to international trade by shifting from bilateral to multilateral payments and "all the major industrial countries have now accepted the convertibility obligations of Article VIII."[2]

One can infer from the manner in which the Fund speaks about monetary policy that it places greater hope on the efficiency of monetary policy for the future. As a result of convertibility since the late 1950's, especially after European currencies became convertible, there has been a massive revival of short term capital movements among industrialized countries. This has obviously played a part in the U.S. deficit, and, according to the Fund, "capital movements have frequently played a disequilibrating, rather than an equilibrating role."[3] As a consequence, deficit countries have tried to discourage

---

[1] Ibid., p. 11.

[2] Ibid.

[3] Ibid., p. 13.

the outflow of funds, and surplus countries have limited the inflow of foreign funds by fiscal and monetary policies.

The Fund finds that reserve currencies form, next to gold, the largest portion of international reserves of the member countries, and in this context asserts that so long as the reserve centers in key currency countries are strong and enjoy unquestioned confidence, they can meet some proportion of the deficit in their balance of payments through an accumulation of liabilities to foreign central banks.[1] To these points the Fund adds that no other country whose currency might be useful as an alternative reserve currency has shown any inclination to encourage or to welcome any such development.[2]

The Nature and Components of International Liquidity

International liquidity consists of "all the resources that are available to the monetary authorities of countries for the purpose of meeting balance of payments deficits."[3] The formal definition of the IMF for international liquidity is quoted here to demonstrate that the utilization of international liquidity for the purpose of making payments for international transactions is excluded. The IMF makes this exception because it believes

---

[2] Ibid., p. 14.

[3] 1964 Annual Report, op. cit., p. 25.

that importers and exporters "use the facilities of international banking and finance for this purpose."[1] Elements of doubt may, however, come to the mind of the IMF Report readers when they look at the components of international liquidity. According to the Fund:

> Such liquidity ranges from assets readily available to resources that become available only after extensive negotiation. It may take many forms: reserves of gold and foreign exchange; other assets that can be mobilized in case of need; facilities to draw on the International Monetary Fund or to borrow from other international institutions; various arrangements with foreign central banks or governments to borrow.[2]

It would seem that the indefinite nature of the IMF definition of international liquidity is due to its attempts to properly classify liquidity. For example, the IMF specifies that "the drawing facilities in the International Monetary Fund can not properly be classified as either owned liquidity or borrowing facilities."[3] In any case, the IMF readily admits that any classification of international liquidity into broad categories is somewhat arbitrary.[4]

Types of International Liquidity

The Fund has found it useful to distinguish between conditional and unconditional liquidity. The

---

[1] Ibid., p. 29.

[2] Ibid., p. 25.

[3] Ibid., p. 26.

[4] Ibid.

former covers resources available to a country "subject to the adoption of satisfactory policies looking toward balance of payments adjustment"[1]; the latter involves the reserves which are more or less freely available to a country depending on how often countries resorted to them and the aggregate resources available to the Fund at the time. The Fund fully realizes that, in practice, countries do not appear to treat these two types of liquidity as interchangeable. The IMF admits that various countries have a preference for international reserves at their free disposal comparable to borrowed funds or credit tranche.[2] The IMF further believes that it is the largest provider of conditional liquidity in the form of drawing rights under the quotas and that the supply of conditional liquidity should be broad and inclusive enough to meet all legitimate needs.

The IMF asserts, and rightly so, that neither too little nor too much of international liquidity is desirable. Too little liquidity is not desirable on the grounds that it gives too little time to deficit countries to adjust to their possible disequilibrium; it may further force them to adopt restrictive controls on trade and investment as well as restrictive financial policies. Too much international liquidity, on the other hand, is not

---

[1] 1965 Annual Report, op. cit., p. 14.

[2] Ibid.

desirable either because financial authorities of some countries may not adhere to any discipline and thus engage in overexpansive policies. This assertion is plausible from an economic standpoint because, on the one hand, if financing of balance of payments were regarded easy and cheap, countries might undertake expansionary policies that they would otherwise have regarded as inappropriate. On the other hand, when circumstances are indicative of a general inadequacy of reserves, an increasing propensity to seek reserves, a reluctance to extend intergovernmental credit, and a marked tendency to increase or restore reserves would set in and become higher-priority objectives of economic policy.

Reserve Creation: Direction of Progress

The basic elements of the supply of and the demand for international liquidity were discussed in Chapter II. It was pointed out that the need for change is sensed by the IMF. The next logical question is: "What is the position of the IMF with respect to the variety of the proposals which have been suggested for the reform of the system?" Does the Fund approve a rise in the price of gold? Or does it favor a flexible exchange rate system? Or neither?

Despite an assertion that there is no need for immediate action to create additional reserves, the Fund admits that the topic of international liquidity must be

examined before such pressing need develops in order that the many problems of principle and technique would not be too hastily considered.[1] The Fund also thinks that improvements have been introduced to the international monetary system which have helped the system avoid the perils of monetary chaos. On these grounds the IMF supports the idea of improving the present system rather than replacing it with a totally different one--a point that many economists such as Lutz, Posthuma, Zolotas, Hansen, Roosa, Bernstein have supported.[2]

The tendency of the Fund for self-support can be read from the following lines.

> From a purely technical standpoint, it would in general be possible to attain through the Fund results (in terms of influencing the total level of world reserves) similar to those that might be sought in other ways, although this might involve certain amendments of the articles of Agreement.[3]

One can further note that the Fund is against raising the price of gold. Again, letting the Fund speak for itself:

> A basic assumption of these studies has been that no change will be made in the price of gold in terms of currencies in general. This assumption corresponds to the endorsement of the established price of gold as one of the bases of the present monetary system, expressed by the responsible authorities of the principal industrial countries as indicated in the

---

[1] Ibid., p. 19.

[2] See above, Chapter IV.

[3] Ibid.

> Ministerial Statement of the Group of Ten, an endorsement in which the Fund concurs. The arguments against a change in the price of gold, including the inequities it involves and the speculative movements to which it is likely to give rise are well known and need not be repeated here.[1]

It is also important to note that the Fund has remained relatively silent on the issue of accepting a flexible exchange system. In addition to this silence one can clearly see, as indicated below, that the whole attention of the Fund's research is centered around reserve creation and relevant questions. This could be interpreted to mean that reserve creation and evaluation of its technicalities has occupied more place in the minds of the IMF researchers; otherwise they should have mentioned somewhere that devotion of their whole attention to the topic of reserve creation does not negate the acceptance or the desirability of a flexible exchange rate.

Furthermore, the Fund states "changes in price levels can not be counted upon as a quick or adequate equilibrating force between deficit and surplus countries." If the phrase "changes in price level" is taken to mean the rate of exchange (which is a connecting link between countries' currencies) then one gets the impression that the Fund is unwilling to rely on a flexible exchange rate.

Apart from rejecting the idea of a rise in the price of gold and indirectly rejecting the dependability

---

[1] Ibid., p. 15.

of a flexible exchange rate system, in focusing its attention on reserve creation the Fund devotes the rest of its research to some of the technicalities of reserve creation. Questions that are raised in this connection are as follows: What type of reserves should be created? How may general reserve needs be established and measured? In what form should such additional reserves be made available? How should they be distributed initially and what role should they play? What institutional arrangements are needed for the management of the reserves? These questions will be discussed next, and the Fund's preliminary answers will be presented. One should remember that the Fund is of the opinion that such questions require a great deal of further study from the viewpoint of techniques and objectives; therefore, the Fund does not mean "to provide definitive answers or present concrete proposals."[1] It does not go beyond mere disucssion of a range of possibilities.

Criteria of General Reserve Needs

What the Fund is aiming at is deliberate creation of reserves by collective international action in the light of an appraisal of the general need for reserves rather than on their creation in response to immediate needs of particular countries for balance of payments assistance.

---

[1] Ibid., p. 16.

This requires elaboration if one distinguishes the need of an individual country in balance of payments difficulties from the needs of the system as a whole. Then it is only the latter need which has attracted the attention of the IMF, as the IMF holds that the former should be attacked through appropriate corrective measures of fiscal and monetary policy.

The Fund realizes that there is no precise criteria to measure the general reserve needs and that qualitative judgement is inescapable.[1] There are many factors which should therefore be taken into consideration. The Fund is specific on some of them:

> Whether, in circumstances in which countries' financial policies are likely to be influenced by the level of world reserves, it appears desirable on balance to enlarge the scope for an expansion of monetary demand or to influence countries in the direction of counter-inflationary action; whether, on balance, exchange rates are under undue pressure, or needed adjustments in exchange rates are being unduly delayed; and whether there are widespread tendencies to speculative capital movements that an expansion in world reserves could to some extent relieve.[2]

Also it would seem that the adequacy of international reserves and liquidity should not be judged in a vacuum as it is closely related, among other factors, to the efficiency of the international credit system, appropriateness of domestic fiscal and monetary policies, the prevalence of single or multiple exchange rates, growth of world

---

[1] Ibid., p. 16.

[2] Ibid.

output and international trade. What is needed is an aggregate long term expansion of international liquidity in order that the expanding needs of world economy will not be hampered.

Types of Reserve Creation

Countries may acquire reserves unilaterally as when a country obtains a reserve currency in exchange for its gold or bilaterally as when two countries make reciprocal credit or swap arrangements. Several countries can also agree on reserve creation either through an international institution or otherwise. Reserves may also be extended to different countries on an unconditional basis or by creating reserve claims in exchange for claims on countries. Receiving countries may be looked upon either as the customers of a domestic central bank, thus creating liabilities on a set of customers vis-a-vis another set, or they may simply exchange claims among each other (or between an international institution and each member country). None of these can be selected and proclaimed as the best alternative; the acceptance of either of these forms, or any other, depends on the attitude of financial authorities of different countries and the negotiations involved. One can, however, rely more on an alternative if it is flexible enough to change reserves in either direction depending on the circumstances of the time.

Transferability of Reserves

Countries should be able to use their reserves for the purpose of balance of payments deficits; reserves must, therefore, be transferable from one country to another or to the IMF--if it happens to be the intermediary institution --or from one currency to another. Countries must also accept, if transferability is to be assured, certain arrangements and obligations. If, for example, countries undertake to accept the created reserves in a certain ratio to gold (or to gold and foreign exchange) the holder of reserves can use them freely and must in turn be prepared to accept them freely. Transferability can, then, be either free, or very limited, or somewhere in between.

Certain other questions related to the transferability of reserves are significant such as whether the reserves bear any interest, whether the holding country enjoys a "value-maintenance guarantee," and eventual arrangements for liquidation should the scheme fail to operate. The Fund believes that such issues not only affect acceptability of new reserves, but also countries' preferences between holding gold and holding reserve currency.[1]

Initial Distribution of Reserves

This is an issue closely related to the type of created reserves. If reserves were created in the form of

---

[1] Ibid., p. 17.

an automatic access to credit, the countries which resort to it would, in practice, be the first round beneficiaries. If, on the other hand, reserves were created in the form of purchases of assets by an international institution, only the countries whose assets have been purchased in exchange for reserves would be the beneficiaries. The two groups may overlap in actuality. Even assuming that they do not overlap, there may be a tendency that sooner or later the bulk of them would gravitate to countries with a high propensity to accumulate reserves. This might necessitate arrangements for re-transfer of such reserves, if this be desirable. The Fund holds, without explaining the reason, that if countries with a strong tendency to hold reserves obtain these reserves at the time of creation, the effect of reserve creation on the movement of real resources between countries and the balance of payments disequilibria would be minimized; while if they were initially distributed among less developed countries, "the creation of reserves would also involve a long-term movement of real resources from the more developed to the less developed countries."[1]

Institutional Aspects

The Fund, as mentioned before, is naturally willing to preserve its present standing or even to enlarge the

---

[1] Ibid., p. 18.

scope of its operations; it believes that even at the expense of some amendments of the Articles of Agreement, the Fund can theoretically attain results similar to those expected in other ways. The Fund's reason for this assertion is that "a matter which is of concern to all countries should be handled in an institution that has been organized as an instrument of financial cooperation on a world-wide basis."[1]

Reserve Creation through the Fund

If reserves are to be created through the Fund, they can take, according to this institution, either the form of an extension of "quasi-automatic drawing facilities beyond the gold tranche" or an operation "whereby the Fund simultaneously would obtain special assets and assume additional liabilities."[2] One way of increasing reserves is for the Executive Board to decide that "the ratio of the Fund's currency holding to quota up to which members can draw on a virtually automatic basis would be raised to some higher percentage of quota."[3] Another way, not so automatic, would be to substitute unconditional for conditional drawing rights. This, however, has the disadvantage that "the Fund's ability to influence its members in the

---

[1] Ibid., p. 18.

[2] Ibid.

[3] Ibid.

direction of the adoption of appropriate balance of payments policies" might be reduced. Still a different way to increase the ability of the Fund in terms of reserve creation is to allow it to acquire guaranteed assets other than the ordinary currency holdings which determine members' drawing rights. Needless to add, liabilities to be created would have to be "suitable for incorporation in countries' reserves." Details of such technicalities can be made more acceptable through negotiations. Under any approach, however, attempts should be made to enable the Fund, without impairing its present influence, to meet the reasonable additional needs.

The Group of Ten

During the Annual Meeting of the Board of Governors of the IMF in 1963, the Ministers and Governors of the ten participating countries in the General Arrangements to Borrow established a study group to make "a thorough examination of the outlook for the functioning of the international monetary system and of its probable future needs for liquidity."[1]

On the tenth of August, 1964, a "Ministerial Statement of the Group of Ten" or the "Report of the Deputies" was published. The Report, which is concerned with

---

[1]Ministerial Statement, op. cit., p. 4.

longer-run prospects,[1] reaffirmed the conviction of the Governors and Ministers that the present system based on a fixed price of gold and fixed exchange rates had proved its value as a foundation upon which to build for the future. For reasons discussed in Chapter III many economists tend to agree with this assertion. The Report made it clear at the outset that the growing world economy and the expanding volume of international trade are likely to create a need for more international liquidity. The Governors held, however, that the then existing amount of international reserves was "fully adequate" and was likely to remain so for the immediate future.[2]

The Governors also emphasized at the outset that the smooth functioning of the international monetary system depends largely on the avoidance of persistent balance of payments disequilibria and effective reliance on appropriate fiscal and monetary policies. Under the prevailing circumstances relevant to the U.S. balance of payments deficit the participating delegates showed their reluctance to make future commitments which might have helped to perpetuate the U.S. balance of payments deficit. The report affirmed that the review undertaken by the Governors clarified various national points of view. The Report was to

---

[1]Reviewing the General Arrangements to Borrow reiterated their conviction that the resources of the GAB would be available for decisive and prompt (short-run) action.

[2]Ibid., p. 4.

be expressed in an unbiased manner; however, the different attitudes of various countries in regard to the functioning of the system were soon apparent.[1]

The main objective of the Group of Ten was to investigate bases of agreement for improvement of the system. It is hard to read the report without receiving the impression that the Group feels that some improvement is needed for the smooth functioning of the system, but precisely what the nature of such improvements should be remains a matter of dispute. On two important subjects--ways and means of adjusting balance of payment disequilibrium and new reserve assets--the Group of Ten was unable to reach agreement during the discussions. As a result both of these subjects were passed on to study groups.

The first group, under the chairmanship of R. Ossola from the Bank of Italy, published a report in May of 1965.[2] Despite the review of various proposals that the group undertook, it showed little progress in terms of resolving the questions related to the type of most important assets. Further reference to this report will be made later in this section. The second group,

---

[1]Since these different attitudes form the substance of the next chapter, only a reference to them seemed adequate at this point.

[2]Group of Ten Study Group on the Creation of Reserve Assets, Report of the Study Group on the Creation of Reserve Assets (Washington, D. C.: U.S. Government Printing Office, 31st May, 1965).

concerned with the means and ways of adjustment in the balances of payment, showed less progress partially because countries hesitate to make commitments in this regard. The following sections will attempt a descriptive review of the suggestions and recommendations made by the Group of Ten in their important issues.

Ministerial Statement--1964

The Group reviewed proposals for the reform of the international monetary system ranging from a return to former gold standard to the establishment of an international central bank with supra-national authority. The group argued that no single plan appeared to meet the requirements to be fully consistent with the operation of international payments and arrangements in a general political, economic, and social environment[1] but did not explain what these circumstances were. The objective of the Group in making this review was, as stated in the Statement, to examine the major aspects of the international monetary system in the postwar world, to make an appraisal of the system, to explore the path of future development, and to set forth a conclusion.

In regard to the functioning of the present system the Ministers held that the system is, and doubtless will long be, in a state of evolution with old elements

---

[1]Ministerial Statement, op. cit., p. 4.

such as gold and foreign exchange and new elements such as international monetary cooperation in the form of General Arrangements to Borrow. Furthermore, while the report focuses on official liquidity, it realizes that private liquidity does influence the international monetary system. The Group does not specify, however, to what extent private liquidity is important, and how it affects the system (equilibrating or disequilibrating?).

In appraising the system the Group emphasized that the system has shown "great capacity for adapting itself to change and growth, and has contributed to the economic development achieved after WWII, in addition to withstanding with success periods of stress." After referring to the continued role of gold and foreign exchange, the Group noted that there is no prospect of any other currency assuming the role of a key currency, and went so far as to say that such a development "could raise problems without substantially strengthening the system."[1]

The Ministers of the Group of Ten also were convinced that there is no single, unique manner in which the expanding needs for international liquidity have to be met, as the various forms of reserves available and the degree of substitutability between them are determinant

---

[1] Ibid., p. 9.

factors.[1] According to the Ministerial Statement some deputies stressed the disadvantage of individual countries' deficits in regard to the source of liquidity and felt that improvements and changes were desirable in the provision of owned reserves. Others noted that key currency countries were unlikely to make as much contribution as in the past to the growth of international liquidity. Accordingly, three lines of advance were agreed upon: 1) strengthening the international monetary system by multilateral surveillance of the means of financing balance of payments disequilibria, 2) support of the IMF quota increases (which was affected in 1964), and 3) investigation of new types of reserve assets which could be introduced and could prove useful in the long run.

The conclusions and recommendations of the Ministers concern support of the continuation of the monetary use of gold, establishment of a multilateral surveillance over the means of financing balance of payments deficits and provision of statistical data bearing on the means of financing (which would provide a basis for multilateral surveillance). The discussion of further needs for reserve assets, another concern of the Ministers, was centered around acceptance of a gold tranche or similar claims on the Fund, or the creation of new reserve assets. The Group did not mention what type of assets should be

---

[1] Ibid., p. 9.

created and how; mention was made only that complex problems would be involved.[1] The Ministers also held that short-term supplies of gold and reserve currencies were adequate but that official bilateral credit facilities such as swaps and a network of standby arrangements would still be beneficial. In regard to the provision of long-term liquidity the Group did not want to lay down general arrangements as it was thought that this type of provision might unjustifiably reduce the attempts for adjustment of the existing imbalances.[2] Finally, the Group agreed that "appropriate credit facilities of the IMF provide an element of strength in the system."[3]

Report on the Creation of Reserve Assets--1965

The problem which was referred to the Study Group[4] concerned an examination of the factors determining the creation of reserve assets and of various methods of meeting the need for reserve assets other than through new accruals of gold and reserve currency balances. The Group attempted to identify some possible indications of the overall general circumstances of inadequacy of reserves. They commented that total need for reserves is conditioned

---

[1] Ibid., p. 11.

[2] Ibid., p. 13.

[3] Communiqué of Ministers, op. cit., p. 2.

[4] Report . . . on the Creation of Reserve Assets, op. cit.

primarily by the needs of individual countries; aggregate need for reserve assets depends greatly upon a compromise among different attitudes of different countries, each faced with different problems of internal economic stability and desiring different degrees of economic independence in international economic relations. Indications of a general inadequacy of reserves were discussed. (These will be referred to in Chapter VIII below since they are more pertinent to a general discussion of reserve adequacy.)

Reserve assets were defined as those assets of a country's monetary authority which can be used to support its rate of exchange when external payments are in deficit; these were categorized into gold, currency assets, and claims on the International Monetary System (gold tranche, GAB creditor position). Each type of asset was then defined as to function, characteristics and how it contributes to increasing aggregate reserves. The Group emphasized that any reserve asset creation must inspire confidence in the international monetary system, conform to established patterns of international cooperation and be flexible so that it could promote the smooth functioning of the system.[1]

Before undertaking the analysis of proposals for new reserve creation, the Study Group discussed the

---

[1] Ibid., p. 20.

procedural matters in regard to methods of reserve formation, distribution and use of resulting assets, scope of membership and the institutional framework, the management and the decision-making apparatus. Each of these fundamental aspects of reserve creation was analysed in relation to the existing system and reserve assets already in existence as well as with regard for the impact of the new asset on policies of present monetary authorities.

The proposals studied by the Group all shared certain common characteristics. The assets created under these schemes would be uniformly available without conditions affecting economic policy; they could be held only by monetary authorities and could not be used to settle private or governmental transactions; they could not be used for direct intervention in exchange markets; and they derive their validity from international convention.[1]

Proposals were broken down into three basic types. Plans for the creation of reserve assets by a group of countries constituted one type: some of these favored the formation of a completely new monetary authority to deal with reserve creation while others also wished to deal with the problem on a limited membership basis but within the institutional structures of the IMF.

Other proposals designed to work through the IMF desired either universal membership or membership with a

---

[1] Ibid., p. 26.

self-qualifying element. Those who planned IMF participation envisaged the extension of normal drawing rights in credit tranches, enlargement of automatic drawing rights, extension of the gold tranche rights without gold payments, or special monetary operations to be carried out through the IMF.

A third group of proposals concerned the provision of currency holders with alternative assets through either conversion of currency balances into reserve positions in the Fund or through the creation of Mutual Currency Accounts.

Underlying their failure to agree upon any one of the proposals discussed, the Group found certain basic differences among their members in regard to several fundamental aspects of the problem of reserve creation. These were concerned with the role of gold, the role of the IMF, width of membership and the rules for decision-making.

Inasmuch as the roles of gold and of the IMF will be given extensive coverage later in this study and consideration will be given there to the views expressed in this Study Group's report, discussion will be limited here. It is sufficient to note at this point that although there was no disagreement on the position of these elements in the basic reserve situation in relation to the introduction of new reserve assets, differences of opinion emerged on the role they would play.

The width of the management group and the distribution of the assets were also open to disagreement. Those favoring a small homogeneous management body felt that the large industrialized countries are the ones principally concerned with the use of reserve for international monetary purposes. They cited the General Agreements to Borrow as a successful venture of such a limited group designed to operate in the best interests of the system. Opponents argued that, while a small group may effectively operate to the benefit of the system as a whole, the consideration of the liquidity system as a whole should not be limited. Because ultimately decision rests in the hands of the limited number primarily engaged in the successful working of the system, the dangers of a too-wide representation would be eliminated.

Dispute over distribution of any new reserve asset also centered over width of the group to be involved. Some felt that since an international asset is based on credit and such credit must be unquestioned, those countries most able to assume obligations for the working of the convention would be the larger industrialized ones. Proponents of a wider distribution argued that smaller nations also need room in international payments in which to maneuver and that if these countries were excluded, they would have to surrender real resources or attract capital inflow to increase their reserves.

Because the economic impact of any scheme would be greatly influenced by rules of decision-making, the body considered several general rules of decision-making. They arrived at no agreement other than that a means of resolving differences of attitude and policy among members which would affect application of any scheme is of primary importance. The rule of unanimity was considered by some to be an essential safeguard of monetary autonomy, and when used in a small homogeneous body would be a feasible means of arriving at agreement. However, the result of a lack of unanimity would be failure to take action, therefore restricting approaches for supplying reserve needs.

The weighted vote with an ordinary majority received strong support from some who pointed to its generally successful use in the IMF. However others noted that criticism has been made of some individual decisions arrived at under this procedure (but did not discuss these specifically) and that reserve creation would entail discussion of even more fundamental issues and divergences which would become sharper. The weighted vote with special majority was only noted in regard to its use in present Fund operations. The exposition of the divergences of view within the Group was an improvement.

Communiqué of Ministers and Governors--1966

The Communiqué of Ministers recognized three actual or potential problems in the international monetary

system. These are: 1) "insufficient effectiveness of the adjustment process," 2) risk of instability resulting from shifts between reserve assets, 3) the probable inadequacy of gold and reserve currencies as a source of new reserves in the future. All these problems had been recognized earlier. From the review of the previous "Statement" it is evident that it was realized that prolonged and large imbalances often have undesirable effects on the economies of the participant countries. Also, the potential risks of instability were realized, risks which prevail in a system in which gold and key currencies exist side by side, capable of being converted into each other or into gold. With respect to the third problem the "Statement" concluded that there was at that time no general shortage of international liquidity, but that in time such a shortage might develop.

After restating the familiar problems the Report discussed possible improvements in the present system. In regard to the adjustment process, the group recognized that the supply of international liquidity has a bearing on the functioning of the adjustment process in that insufficient adjustment efforts may contribute to inflationary tendencies and/or place an undesirable burden on the real resources of the countries. On the other hand, a harsh adjustment process could endanger the aims of growth and stability of the international economy or its individual components.

Multilateral surveillance was again emphasized and the Report added that it has proved its usefulness. In order to make this surveillance possible, participants should provide the Bank for International Settlements with monthly confidential reports on their external monetary positions which were to be reviewed by the BIS and help the Bank in making a collective judgement on the monetary position of the world as a whole and of individual countries. One approach toward strengthening of multilateral surveillance and toward harmonization of reserve policies which was put forward is very similar to Posthuma's Plan, as can be seen from the following lines.

> According to this proposal, high gold ratio countries would settle deficits mainly in gold and accumulate surpluses mainly in other reserve assets, whereas low gold ratio countries would do the opposite. In this way, members would make an effort to narrow down the existing discrepancies between their gold ratios by bringing each individual ratio, progressively and by stages, towards a band established around the average ratio of the Group.[1]

The Report added that in the long run some understanding with regard to the composition of reserves would become necessary if reserve policies were to be adjusted to the declining share of gold in reserves. The Report stated that in order to provide for short-term credit facilities a network of reciprocal credit such as swap agreements would be needed.[2] It concluded that in the long run,

---

[1] Communiquè of Ministers, op. cit., p. 5.

[2] Ibid., p. 6.

however, since the supply of reserves from traditional sources such as gold and foreign exchange was "unlikely to keep pace with legitimate demands," supplementary means would probably be needed in order to "provide for an adequate secular growth in reserves."[1] This marked a remarkable difference in the attitude of the Group of Ten Ministers; as it had clearly declared in 1964 that the supply of liquidity was adequate and would remain so for the foreseeable future.

It was recognized that the process of reserve creation should be neither geared nor directed to the financing of the balance of payments deficits of the individual countries; rather it should take place on the basis of world needs for reserves. However, this was not discussed at any point. Contingency plans were also emphasized and according to the report were not to be based on reserve creation for distribution to all IMF members either on the basis of their quotas, or of their quotas plus GAB commitment or a similar formula.[2] The new supplementary reserves would take the form of new issues of reserve units which would be, according to the Group, transferable between the Fund and the monetary authorities

---

[1] Ibid., p. 7; one of the members, however, was prepared to accept the notion of a shortage of reserves sometime in the future only as a legitimate working hypothesis.

[2] Ibid., p. 18.

and could not be used for direct market intervention.[1] The Report realized that all countries have a legitimate interest in the adequacy of international reserves. Yet, in regard to their creation, the Report specified that most of the ministers favored the creation of new reserves by a limited group of the major countries who held key positions in the functioning of the international monetary system.[2] The Report attached the greatest importance to the adoption of internal economic policies conducive to balance of payments adjustment.

Despite improvements and agreement on the process of deliberate reserve creation, the Report did not solve the problems concerning provisions which would govern the use and acceptability of reserves, the role of multilateral surveillance in reviewing reserve policies and the techniques of minimizing strains on the system. For these, and other similar problems, the Report specified that further studies would be required.[3]

A Semi-Official U.S. View on Reform

Because of the international role that the dollar has played as a key currency in the international monetary system, the United States has been especially concerned

---

[1] Ibid., p. 19.

[2] Ibid.

[3] The outline of the settlement reached at Rio de Janeiro will be discussed briefly in Chapter VIII below.

with the problems of the international economic system. The subject of reform in the system has attracted the attention of the U.S. Congress' Joint Economic Committee.[1] Accordingly, the Committee has proposed guidelines for reform. These guidelines can be discussed from the standpoint of the Committee's position with regard to the present and future role of the dollar, gold, and the IMF, considerations for the creation of new reserve units and other means of strengthening the system.

The Committee asserts that the demand for the dollar as an official reserve is likely to remain high; even if monetary authorities of other countries choose to reduce their holdings of dollars, the role of the dollar in private transactions will be unimpaired. The United States should seek neither to reduce nor to expand the international role of the dollar. At the same time arrangements must be made that would not encourage countries to convert their existing or future balances of key currencies into gold. If such arrangements are introduced, the dollar can continue to play a voluntary international role as it can be used abroad by businessmen, traders, and bankers without resulting in pressures on U.S. gold holding.

---

[1]U.S., Congress, Joint Economic Committee, Subcommittee on International Exchange and Payments, Guidelines for Improving the International Monetary System (Washington, D. C.: Government Printing Office, 1964), pp. v-vi, reprinted in Hawkins (ed.), op. cit., pp. 129-131.

Interestingly enough, the Joint Economic Committee has felt, just as has the IMF, that gold should continue its present role as a medium of international exchange. The Committee has gone even one step further by setting a guideline for the U.S.: namely, the U.S. should not seek to undermine the role that gold presently plays in international affairs. Furthermore, no arrangements should be accepted which would, or could, result in providing incentives to convert key currencies into gold.

Present international reserves such as gold, dollars and pounds sterling, cannot adequately meet world liquidity needs even if new reserve currencies were to be added.[1] In the Joint Economic Committee's view new ways of creating international reserves must be sought which should combine agreed minimum annual increases to be supplemented and/or modified by annual decision. The J.E.C. has full respect for the International Monetary Fund, and it specifically indicates that such new arrangements should be carried out under the IMF. The IMF can, by developing a new reserve unit or claim or by making drawing rights more automatic and larger in amount or even by special operations in gold, currencies, and deposits, create new international reserves. The distinction between borrowed and owned reserves should not be critical in

---

[1]One cannot make quite sure that if new reserve currencies are added, the world would still lack liquidity. Here, however, the opinions of the Committee are expanded.

choosing among these possible methods.

The new reserves, according to the J.E.C. cannot be used as a primary foreign aid device, yet economic development can be respected by selecting suitable standards to allocate the newly created reserves. The Committee holds this opinion because it asserts that securing the newly created reserves by the credit of less developed countries might impair their acceptability. The Committee is specific on the distribution of newly created reserves from the standpoint of their recipients as it indicates that such reserves should be distributed among all Fund members who would qualify according to criteria which could be applied impartially to all countries.

The Committee held that creation of additional reserves is not enough, specifying that the conditional credit facilities of the IMF should be expanded at the same time that new reserves are created. To go still one step further, it adds that international financial responsibilities should be shared in a better manner through an improved structure of Fund quotas.

It also goes beyond mere international financial reforms and states that such reforms, however desirable, are not sufficient insofar as they do not take the adjustment process into account. Accordingly, substantial improvements in the adjustment process are regarded to be needed. Although the Committee does not state

specifically what types of improvements are needed, it feels that a harmonization of national fiscal and monetary policies and agreement between countries upon codes of national behavior with respect to restrictions on capital movements for balance of payments reasons can better the international monetary system.

The Committee's outlook is not limited to a short-run evaluation of the reform as it maintains that the present second line of defense against short-term instability--bilateral arrangements--should be expanded, emphasizing, however, that they are not a once-and-for-all solution for long-term needs. Finally, from the standpoint of negotiating strategy the Committee asserts that all members of the Fund should be eligible to participate in a conference for reform of the system, yet a unanimous vote should not be required.

CHAPTER VI

NEGOTIATING ASPECTS OF THE PROBLEM

Whether or not a country regards reform of the present international monetary system desirable depends, among other things, on the following factors: whether the country in question is economically developed or underdeveloped, and if developed whether it is a key currency country or not, whether the country is suffering from excessive or inadequate demand pressures, whether more stability or more adjustment of exchange rate is desired, whether the country will have to resort to compensatory financial policies if a change is adopted, whether the accepted reform would bring about trade and capital movement restrictions, whether adequate hope can be placed upon the relative effects of alternative changes, whether the country in question is politically ready for the acceptance of effective international negotiations, whether it has inflation in its domestic economy or not, and whether it has deficit or surplus in its balance of payments.

The desirability of reform, then, depends on innumerable economic and noneconomic factors. In the

words of J. M. Fleming, since "consensus between governments is unattainable," one can hope that "the dictatorial judgements of economists may help to provide the basis of a reasonable compromise."[1]

> It would be unreasonable to expect that anyone could devise an international monetary system serving all purposes optimally. Since people's aims are different, and to some extent incompatible with one another, no system can be objectively called the best. Only if we could first agree on a single objective to be given absolute top priority or if we could agree on preference scales for mutual trade-offs among different objectives would it be possible for us to judge one of the plans superior to all the rest. There is, of course, no chance for such agreement ever to be obtained.[2]

Due to their differences of opinion and biases, economists have had, by and large, a hard time reaching agreements on the topic of the international monetary problem. In his latest work Triffin reported that Machlup had organized meetings of thirty-two academic economists in answer to Secretary Dillon's press announcement (at the 1963 meeting of the IMF) that "no academic economist would be invited to testify before the Group of Ten, presumably because it was felt that they never would agree

---

[1]J. Marcus Fleming, "Toward Assessing the Need for International Reserves," Princeton University--International Finance Section, Essays in International Finance, No. 58 (Princeton, N. J.: Princeton University Press, February 1967), p. 1.

[2]Fritz Machlup, "International Monetary System and the Free Market Economy," Princeton University--International Finance Section, Reprints in International Finance, No. 3 (Princeton, N. J.: Princeton University Press, February 1966), p. 1.

anyway on any practical solution of the problems under debate.[1]

Part of the economists' disagreement can be justified in view of the fact that they are from different countries with somewhat different political points of view. It is necessary, therefore, that such different political as well as economic viewpoints be analyzed in an attempt to better understand the feasibility of various proposals. This is especially inescapable if one is to look into prospects for the future.

One can, for analytical reasons, neatly break down the dangers of the present international monetary system and its major defects into three problems: 1) liquidity, 2) confidence, 3) adjustment. The first problem is concerned with what should be done to provide the system with adequate liquidity if and when it is needed; the second is related to what to do to prevent a lack of confidence or what to do should a crisis of confidence happen, e.g. attempts to convert currency reserves into gold; finally, the third problem is concerned with what facilities should be provided for the countries which would possibly face persistent disequilibrium of international payments and with what can be done to make adjustment more effective as a counter to difficulties. Machlup reports that at the

---

[1]Triffin, The World Money Maze, op. cit., p. 317.

1965 annual meeting of the Governors of the IMF, "liquidity" was given top priority by the U.K. and the U.S., while voted last place by Belgium, France, Germany, and the Netherlands; "confidence" was awarded highest rating by the Governors from the Netherlands and Italy; finally, France and Germany gave top billing to "adjustment."[1] This can be taken as a sample of the distribution of weights given to the three problems by some of the economically advanced countries. It is more likely that underdeveloped countries, in view of their problems of internal and external finance, would give top priority to liquidity. Attention will therefore be focused in the following section on some of the attitudes of different countries. Although the primary focus of attention is economic, political as well as institutional implications of the various attitudes cannot be ignored.

The Position of France

According to American sources, as can be seen below, the French position is influenced by noneconomic factors such as jealousy, prestige, etc. For such reasons, and partly due to the conversion of dollars into gold with the resulting increase in gold reserves, the French monetary

[1]For more details see: Fritz Machlup, "World Monetary Debate--Bases for Agreement" in: Princeton University--International Finance Section, Reprints in International Finance, No. 4 (Princeton, N. J.: Princeton University Press, September 1966). Reliance is placed on this study for the preparation of this section.

authorities claim that there is no such thing as a world liquidity shortage. The idea that the balance of payments deficit of individual countries should not be confused with a world wide problem of international liquidity has its root in the French position. A September issue of The Economist reports that

> not only the French, but most of their partners, have not budged an inch from the view that while the United States runs persistent and sizeable balance of payment deficits there is no shortage of liquidity.[1]

Charles Kindelberger is more specific when he says:

> At the bottom of much of the European case against the dollar standard is prestige . . . and much of the French case rubs off on other Europeans. Prestige is expensive. It is expensive in earnings foregone on foreign exchange reserves (corrected for a proper evaluation of the risk of loss through [dollar] devaluation) and it is expensive in transaction costs.[2]

It is interesting to note that, according to Kindelberger, the dollar is a world unit of account, a world standard of value, a world medium of exchange, and finally a world standard of deferred payments.[3] Thus the dollar is performing its monetary functions in the world scene, whether France likes it or not. A gold exchange

---

[1] The Economist, no volume yet, September 2, 1967, p. 800, column one.

[2] Charles Kindelberger, "The Politics of International Money and World Language," Princeton University--International Finance Section, Essays in International Finance, No. 61 (Princeton, N. J.: Princeton University Press, August 1967), p. 2.

[3] Ibid., pp. 2-3.

standard based on the use of dollars is unacceptable to France which wishes to become the world's central banker; on this Kindelberger has the following analogy between money and language in the international sphere: "Languages are ordered hierarchically. Like sterling, French used to dominate. Like the dollar, English does now. Frenchmen must learn English."[1] Kindelberger is saying, in effect, because the U.S. buys and sells gold at a fixed price in dollars, and because the dollar has more price stability, larger capital markets, and more capacity to supply incremental exports at relatively constant prices behind itself, the dollar deserves the role that it now performs in the world. By the same token, French francs, Dutch marks, lire, etc. do not enjoy all these advantages.[2] Without agreeing with the arguments of Kindelberger one can see some elements of truth in them.

One can gather how France looks at the problem from the following points:

(1) The gold-exchange standard permits the United States to consume beyond its capacity to produce.[3] Kindelberger suggests that De Gaulle's monetary advisor Jacques Rueff suggested this at a time when the American balance of

---

[1] Ibid., p. 8.

[2] Ibid., p. 4.

[3] Ibid., p. 2.

payments on current account reached close to record surpluses.[1]

(2) For a good many years the U.S. has spent, lent, and invested abroad more than it has received. Some of the U.S. foreign spendings are for purposes that France does not approve--such as expenditures for the prosecution of the war in Viet Nam and for the take-over of foreign firms, including industrial concerns in France.

(3) According to Machlup another feature in the French position has been the downgrading of plans for borrowing facilities and the creation of new reserves.

> The affluence of the Bank of France that followed the devaluation of 1958, and has now reached enormous proportions, makes it hard for the French to appreciate any talk about a present or imminent shortage of reserves in the world. The growth of reserves in France and a few other countries has contributed to embarrassing inflationary pressures. The French experience, therefore, is one of abundance of reserves and, if some nations have been unable to get a share in this abundance or even to avoid payments deficits, they evidently have not been "living right."[2]

(4) Also France has, or may have, a fear of possible devaluation of the dollar.

(5) Going beyond the above points and listening to the French spokesmen, one can see, for example, that the French leading monetary authority who is advising De Gaulle, Jacques Rueff, is an ardent supporter of a return to the

---

[1] Ibid.

[2] Machlup, "World Monetary Debate," op. cit., p. 2.

gold standard. The automaticity of such a system in theoretical terms and its supposed efficiency as an adjustment mechanism greatly reduces the need for liquidity and reserves. According to the advocates of a pure gold standard system, a loss of gold due to disequilibrium in balance of payments would reduce the money supply of the country in question which is facing deficit, while the surplus country would expand its money supply because of its gaining gold. The decreasing money supply in the deficit country would create tight credit conditions, higher interest rates, and lower incomes; the opposite reactions would occur in the surplus country. As a consequence, exports of the deficit country should rise and its imports fall, and the reserves reactions should occur in the surplus country. These processes of adjustment to gold transfers within the deficit and surplus countries are assumed to go on until eventually an equilibrium would exist, by the rule of market forces, among countries.

The gold standard system gained appeal during its "golden age" in the last century and, without doubt, could set a standard and procedure by which international maladjustments could be ironed out without tinkering and meddling by monetary authorities. There are, however, some basic assumptions behind this system, and it is likely that it would not work so automatically if, among other things, the following assumptions do not hold true.

a) The proposal assumes that the domestic money supply will necessarily change as there is a change in gold reserves of the country.

b) It further assumes that the change in money supply is in the same direction as the changes in the country's gold reserves.

c) The proposal requires that the change in the money supply be no smaller than the change in gold reserves.

d) It assumes that there is no sterilization of the effects of gold inflow on the money supply by government actions.

e) And finally, the gold standard system would work best if there were 100 per cent gold backing for the money supply. Once a fractional reserve system exists the central bank may manipulate to change the ratio of gold to money. The advocates of the gold standard see the reserve currency component of international reserves as the source of the fundamental difficulty of the present system.

One can close discussion of the French position with one quotation from Triffin.

> The surplus countries of today--or yesterday--might well have cause to regret tomorrow their failure to negotiate from strength, and to seize in time the opportunities open to them when their American partner negotiated, more amenably, from a position of relative, but temporary weakness.[1]

It is also interesting to note that Triffin asserts that those who argued that negotiation for the reform of the

---

[1]Robert Triffin, "From Waterloo to Tokyo" in The Economist, vol. 208, August 15, 1964, p. 659.

system should be postponed until the U.S. balance of payments had been put in order "lest new international credit facilities be abused to finance balance of payments deficits and monetary irresponsibility in the United States" now argue that "reforms have become unnecessary in view of the spectacular improvement in the American balance of payments and of the consequent abatement of the dollar crisis."[1]

The Position of the United States

From what has been already presented, one can see that much of the disturbance in the political atmosphere governing the negotiations related to the reform of international monetary system has been created by France. Not all of France's objections are theoretically well-founded. The United States appears to have a feeling that it has been committed to maintaining the gold value of the dollar. Before assuming office as President, the late John F. Kennedy made statements to the effect that "the dollar price of gold would in no event be changed."[2]

There are two significant, optimistic suppositions that underlie the American position. First, the U.S. thinks--and there are elements of truth in this--that the dollar is functioning in the role of an international money as it is performing the functions of: a medium of

---

[1] Ibid., p. 659.

[2] Reprinted in The South African Journal of Economics, op. cit., p. 94.

exchange, a world standard of value, a world standard of deferred transactions and a unit of account. Moreover, according to Machlup the U.S. thinks that "the dollar is as good as gold and will remain so even if the deficit lasts for another few years."[1] Second, the United States believes that its deficit can and will be eliminated shortly.[2]

The attitude of American monetary authorities is thus understandable. They feel that if any change is to be made, "it should be after cool consideration, and not under the force majeure of market forces."[3] Machlup takes a similar position and says: "One can hardly expect a debtor, in a situation regarded as precarious by some of his creditors, to propose and urge that measures be taken to safeguard against a loss of confidence in his ability to pay."[4]

Official American authorities, therefore, feel--perhaps in view of the statements made by President Kennedy and also on prestige grounds--that agreement to a rise in the price of gold would involve loss of dollar face value.

---

[1]Machlup, "World Monetary Debate," op. cit., p. 2.

[2]Ibid.

[3]The South African Journal of Economics, op. cit., p. 94.

[4]"World Monetary Debate," op. cit., p. 3.

This according to Sir Roy Harrod, the old ardent and real advocate of a rise in the price of gold, is a false point.

> The real loss of face was when the dollar lost more than half its value in terms of goods during the war and the following years. A change in the dollar price of gold would merely mean the recognition of facts that already exist.[1]

Undoubtedly there has been some degree of inflation in the U.S. economy in the past years, but what Harrod does not take into account is the possible, and probably disastrous, consequences of an official change in the value of the dollar in terms of gold. This may bring about monetary chaos and thus affect the distribution of income and of wealth within the American society, the distribution of foreign exchange reserves among countries in the international scene and the functioning of price mechanism in both American and international economies.

The United States also thinks, and rightly so, that if it were not willing to accept a deficit in its balance of payments, the growth of world trade and world prosperity would have been much less. The U.S. also realizes that if its balance of payments deficit is eliminated and nothing takes its place, the annual growth of the non-communist world reserves will be confined to country's drawing rights on the IMF, the acquisition of gold by monetary authorities, and potential borrowing

---

[1] The South African Journal of Economics, op. cit., p. 94.

capacities of different countries.

The concern of the United States with the realization of the strategic importance of external finance in the process of development of developing countries should not be neglected. Also it is very likely that the U.S. may have noticed that mere reliance on domestic policies for an increase in domestic savings and the financing of development is not sufficient to meet the requirements of development. Finally, whether France, Russia, and others like it or not, the U.S. has become involved in foreign commitments, and for prestige and political reasons it can not easily withdraw. In the meantime, so long as all foreign expenditures, no matter for what purposes, remain and exceed total receipts, the deficit remains. Elimination of U.S. deficit may be easier economically than politically. Thus one can hope for an honorable way out of the dilemma for the U.S., a way which would seem to be centered more around the creation and utilization of more reserves than the acceptance of either a rise in the price of gold or a flexible exchange rate.

Referring to the American position Harrod believes:

> The Americans on their side also appear to take the view that no bold initiative can be made by them until their deficits are terminated. This arises from a sense of diffidence; they fear that, if they press forward with proposals, the Continental Europeans would argue that the proposed scheme was merely another device by the Americans for getting the rest

of the world to bale them out of their difficulties. And this is precisely how they would argue.[1]

The Position of Great Britain

Because of the use of the pound as a key currency and especially in the sterling area, the financial position of the United Kingdom has been one of the major concerns of the world's central bankers.

At the end of December, 1966, United Kingdom external sterling liabilities were $12499 million, which is 17.47 per cent of world international reserves in 1966 as quoted below. External claims of the U.K. (on central monetary institutions, banks and others) in the same month stood at $3436 million.[2] If this were deducted from U.K. external liabilities, a figure of $9063 million could be obtained, which might be referred to as the U.K.'s net external sterling liability. This constitutes 12.67 per cent of $71510 million,[3] the world's international reserves in 1966.

In addition to the fact that a large part of international trade is still financed in sterling, and apart from the fact that sterling assets of countries other than the U.K. constitute a substantial proportion of the total

---

[1] Ibid., p. 102.

[2] International Financial Statistics, Vol. 20, No. 8, op. cit., p. 301.

[3] Taken from Table 23 below.

international reserves (17.47 per cent on a gross basis, and 12.67 per cent on a net basis), the convertibility of sterling is a prerequisite for the convertibility of several other currencies.

Furthermore, the foreign trade orientation of the U.K.'s economy affects its international position in that its foreign trade is large in relation to its gross national product and its reserves, as can be seen from the following table. Shifts in payment leads and lags may cause important movements of reserves. Such movements may sometimes be accentuated by changes in the amounts of sterling credits used by other countries to finance transactions not directly connected with the United Kingdom's international trade. Finally, the U.K. has had, and still has, grants of foreign credits, foreign investment (direct or portfolio) and other foreign capital transactions (including repayment of debt), and emerged from the Second World War with greatly increased foreign liabilities, largely reduced foreign assets, and a great deal of wartime damage which have affected the course of its reserve problem. Its foreign liabilities, mainly in the form of sterling balances, can be easily drawn upon; if this were done, the financial ability of the U.K. would be affected. Under the above conditions, any adverse circumstances are likely to affect confidence in sterling and to lead to substantial changes in sterling reserves. In view of the existence of the

TABLE 8

U.K. IMPORTS, EXPORTS, INTERNATIONAL RESERVES, AND GNP
(as of December 1966, in millions of U.S. dollars)

(1) Imports & Exports	(2) International Reserves & GNP	(3) % ratio of (1)/(2)
U.K. Imports (cif) 15859	U.K. International Reserves 3100	511%
U.K. Exports (fob) 15947	3100	514%
U.K. total international trade (defined as exports & imports) 31806	3100	1025%
U.K. Imports (cif) 15859	U.K. GNP* 27384	57.91%
U.K. Exports (fob) 15947	U.K. GNP 27384	58.23%

Source: International Monetary Fund, International Financial Statistics, Vol. 20, No. 8 (Washington, D. C., August 1967), p. 35 for imports; p. 34 for exports, p. 303 for GNP.

*U.K. GNP is given in pounds sterling and is 9.78 billion pounds sterling, or 9780 million pounds sterling. Using a rate of exchange of £ = $2.80, if this figure were converted to U.S. dollars = £9780 X $2.80 = $27384.

sterling area, the heavy foreign trade orientation of Britain, and all of the above factors, it is not surprising that the U.K. has been concerned with confidence in its sterling and with maintenance of monetary order in the international economic relations.

Compared to the U.S. position, then, England sees more urgent needs for reform of the international monetary system. Their incentives, however, vary: the U.S. places more value on world prosperity due to its economic leadership of the Western world, while the United Kingdom seeks a way out of difficulties. Part of this can be explained by the recent deficit years and loss of international reserves that the U.K. has faced; in each case, of course, the U.K. has been able, through the cooperation of the IMF and other countries, to stand ready to defend pound sterling and prevent a monetary chaos. Yet one can safely assert that all these disorders have placed more and more burdens of keeping the world confidence, and negotiations necessary for this purpose, on the U.K.'s shoulders.

To some extent the United Kingdom has made obligations to help the developing countries, especially Common wealth nations. In this the U.K. resembles the United States. For this reason, and also in view of the fact that the U.K. has had to suffer years of deficit with resistance against speculative movements of the pound sterling and expectations of pound devaluation on the part

of other countries, it is desparately in favor of reform of the international monetary system.

The United Kingdom had a deficit in 1960 that was financed temporarily by a high interest rate which attracted private short term capital. In 1961 partly because of the upward valuation of the German mark in February of that year, and perhaps partly due to the deficit of the previous year a lack of confidence in sterling developed. The U.K. obtained the support of continental Europe by means of the Basel Agreement. The United Kingdom, it was understood, would repay credits it had received in this way by drawing on the IMF. This, coupled with the U.S. balance of payments deficit created the prospect of two countries with large quotas to draw on the IMF.

The U.K. deficit, along with more international concern over the maintenance of order in the international monetary system, had bearings on the development of new arrangements: General Arrangement to Borrow. Article VII of the IMF Agreement provides that the Fund may borrow currencies if and when they are in danger of becoming scarce. The Managing Director of the Fund in 1961, Per Jacobson, could have persuaded the countries whose currencies were in danger of becoming scarce to lend them by resorting to this clause if he had so desired. He was, however, cautious and perhpas thought it would be wiser to make a multilateral arrangement, including more

industrialized countries whose monies are not becoming scarce, at least in the immediate future. Under these circumstances, the United Kingdom, the United States, and eight other countries agreed to put up respectively $1000, $2000, and $3000 million among themselves in the form of a stand-by arrangement. This became known as the General Arrangement to Borrow.

A final note on the British position concerns her interest in terms of joining the European Economic Community--more commonly known as the Common Market.

> The British are not in a good position to take a bold initiative owing to the recurrent sterling crises in recent years arising from lack of confidence in the maintenance of the sterling parity and their dependence on foreign credits for dealing with these crises. . . . The British position is also temporarily complicated by their application to join the Common Market, which would make them hesitant about backing up a strong initiative by the Americans, if this was opposed by the Common Market countries.[1]

The Position of the Developing Countries

So far three relatively different attitudes have been discussed. Analysis of the position of other countries can throw further light on the topic. It is not practical, however, to examine the attitude of each country. The three countries chosen so far can be regarded as a representative sample of the various views of industrialized countries. But since the developing countries have

---

[1] The South African Journal of Economics, op. cit., p. 102.

been thus far left out of the discussion, it is now necessary to look at the problem from their standpoint also.

The way some--and perhaps most--developing countries look at the problem of international liquidity can be summarized as follows. They think that some of the capital exporting countries are beset with balance of payments problems. Even if they are not beset with balance of payments difficulties, the export of capital from them depends much on their willingness and/or regulations; they have not always shown such a willingness. Furthermore, official loans are occasionally tied with respect to their source of procurement. Finance is also earmarked to specific projects approved by the capital exporting country --needless to say the scale of preferences of the two groups do not always correspond. Moreover, even food which is distributed in kind will be distributed when the donor country is burdened with agricultural surpluses.

From a domestic standpoint, on the other hand, underdeveloped countries face difficulties in increasing their domestic savings through various means such as taxation, forced savings, voluntary savings, inflation, etc. Under these circumstances they are facing problems from two fronts: external and internal finance. The experts of the International Bank for Reconstruction and Development have evidence to suggest that "an increase of several billion dollars in external finance is well within

the absorptive capacity of such countries."[1]

Economic relations between industrialized and the developing countries are not limited to trade and investment matters. It is by now a familiar argument that some of the developing countries have a "high foreign trade orientation"[2] and occasional fluctuations in their foreign exchange earnings (especially those whose exports are largely raw materials and primary products). This may create a rather special need for reserves to enable these countries to fall back on in bad years; otherwise their development programs may have to be postponed or not implemented at all.

In spite of their need for financial reserves they have had to suffer from the inadequate supply of international liquidity. Moreover, the economic strength of their countries in terms of fiscal and monetary policies cannot make one very optimistic about how they can overcome their problems of finance.

---

[1]N. T. Wang, "New Proposals for the International Finance of Development" in Princeton University--International Finance Section, Essays in International Finance, No. 59 (Princeton, N. J.: Princeton University Press, April 1967), p. 1.

[2]A. J. Kondonassis, "Concepts of Economic Development with Special Reference to Underdeveloped Countries" in University of Oklahoma--Graduate International Studies Program, The Emergent Nations, Monograph No. 1 (Norman: University of Oklahoma Press, 1963), p. 81. See also Harvey Leibenstein, Economic Backwardness and Economic Growth (New York: John Wiley & Sons, 1957), pp. 40-41.

Underdeveloped countries have further been excluded from many plans for the reform of the international monetary system. Three reasons for this may be found:

(1) There is the argument that these countries are "too poor to afford to lock up 'real resources' in the form of reserves."[1] This argument is counterargued by reference to fluctuations in their foreign exchange earnings, high foreign trade orientation, and their special need for real reserves to fall back on.

(2) It is also held that the currencies of these countries are not of sufficient importance to justify their inclusion in a scheme for reform of the international monetary system. Sir Roy Harrod, in response to this assertion, points out that if, e.g., such countries wish to withdraw from the scheme and they have reserve units to be converted, then their currencies would necessarily have to be considered worthy of consideration.[2]

(3) There is also a belief that underdeveloped countries should be kept out of the management of the new schemes for reform of the system on the grounds that they might advocate inflationary reserve creation and, while lacking monetary discipline, might bloc their votes in such a manner as to push through the policy they desire. This

---

[1] South African Journal of Economics, op. cit., p. 100.

[2] Ibid.

fear is not justifiable, because, as Harrod points out, these countries "have only a small voting power in the Fund and any inflationary proposals by them could always be outvoted by the members of the Group of Ten."[1]

Harrod finds none of these three arguments "really tenable."[2] The real fear, in Harrod's estimation, is that if underdeveloped countries "had any say in the management" of a reform proposal, "they might join with the Anglo-Saxon countries in the International Monetary Fund and out-vote the more conservative members of the Group of Ten."[3]

In recent years, however, more attention has been paid in scientific circles to the desirability of the participation of underdeveloped countries in schemes for the reform of the international monetary system.

> A more decentralized IMF, recognizing and encouraging openly the role of emerging regional monetary organizations and integrating in Europe, Latin America, and elsewhere, would be far preferable economically--and politically--to a rump IMF overshadowed by a separate rich nation's club of the ten or eleven most powerful industrialized countries.[4]

Under such circumstances, it is not surprising that underdeveloped countries have been excluded from having

---

[1] Ibid., p. 101.

[2] Ibid., p. 100.

[3] Ibid., p. 101.

[4] "From Waterloo to Tokyo" in The Economist, op. cit., p. 659.

any share in the management aspects of the plans for reform of the system. Their eventual interest in smooth functioning of the system, however, should not be neglected. Despite the clear recognition of the absorptive capacity of underdeveloped countries and the strategic role of external finance to their development programs, the flow of international liquidity to developing countries has not always been regarded to be sufficient. Therefore, their needs should not be neglected, and adequate international liquidity could prove helpful to them. Machlup reports: "The spokesmen for developing nations stressed chiefly the problem of liquidity and the importance of having their countries share in any distribution of greater reserves and easier borrowing facilities."[1] The concern of underdeveloped countries discussed in Chapter II above throws further light on this section.

What Then?

It is now appropriate to integrate different significant points from the positions already discussed. As mentioned above, France denies a problem of shortage of international liquidity as such, yet believes the present international monetary system is not satisfactory in that it does not provide for adjustment in the case of persistent balance of payments imbalances. The United States

---

[1] "World Monetary Debate," op. cit., p. 3.

regards reform of the system to be useful, yet has been unwilling to show any weakness in negotiations (and to pursue negotiations out of fear) by agreeing to demands concerning elimination of its balance of payments deficit as a prerequisite for reform negotiations. The United Kingdom has been under severe balance of payments and speculative pressures in recent years and has been hard-pressed to defend the pound. How successful it will be in this direction remains to be seen. The U.K., in consideration of its application to join the Common Market, has been unwilling to make statements which might hurt its prospective Common Market partners. The underdeveloped countries are not strong enough politically to participate in the negotiations, yet the problem also interests them.

To the above considerations one must add theoretical disagreements between theoreticians and policy makers and even within academic circles. It is for these reasons that some of the leading authorities in recent years have tried to look into the bases for agreement not only through their writings, but also by establishing seminars in different places.[1] The objectives in such attempts have

---

[1]Fritz Machlup, professor of Economics at Princeton University, is a striking example in this regard as he organized meetings of thirty-two academic economists at Princeton University and Bellagio, in answer to Secretary Dillon's press announcement at the 1963 meeting of the IMF that ". . . no academic economist would be invited to testify before the Group of Ten, presumably because it was felt that they never would agree anyway on any practical solution of the problems under debate. . . ." See The World Money Maze, op. cit., p. 317.

been to provide the policy makers with guides to the points of agreement among theoreticians. One can read from these why the problem of the international monetary system has not yet been solved. These are meant to be guidelines and samples to show the point of disagreement as well as the different attitudes of the governments. (It is felt that enough has been said in this direction.) More thorough analysis of the political disagreements and their justification is felt to be beyond the scope of this analysis.

There is, however, an important point to be clarified, namely that

> Even those most reluctant to see any reform may feel that they cannot resist indefinitely the growing world demand for it. It is not as though the problem itself would disappear; the shortfall in the growth of world reserves compared with the growth of world trade will continue to operate and will accelerate.[1]

Robert Triffin, referring to the meetings of thirty-two academic economists (mentioned in a previous footnote), observed the following:

> We all recognize the existence of three separate, but interrelated problems in this area: (a) the need for relatively prompt intercountry balance-of-payments adjustments so as to avoid the growth of cumulative disequilibrium; (b) the need for long-term adaptation of the over-all volume of world reserves to the full non-inflationary possibilities of economic growth; (c) most urgently, the need for reduction of the vulnerability now imparted to the system by an excessive overhang of international short-term dollar and

---

[1] The South African Journal of Economics, op. cit., p. 103.

> sterling indebtedness resulting from past reserve accumulation by central banks (i.e. for the liquidation of the so-called "reserve currency system."[1]

Taking Triffin's word one can see that academic economists are trying to be helpful to the policy makers by providing them with points of agreement. Indeed, one gets the impression that as time passes they are able to understand each other's points more thoroughly. At the same time recongition is given to the impracticality of some proposals for reform of the system--such as the proposals for raising the price of gold which brings out the opposition of the U.S., the U.K., and a few other countries. If an understanding exists among the academic economists, then what one can hope is to see the practicing economists test the degree to which they can reach consensus on their first, or, as Triffin emphasized,[2] even on their second-best answers to the problem rather than to look for panaceas. The process of adjustment could be made to be as painless and orderly as possible, more liquidity could be provided for the growing needs of world trade and investment so that each country would have command of foreign currencies to tide it over a balance of payments deficit; before these can be done, however, there must be some common understanding of the problem which might be achieved through negotiations.

---

[1] The World Money Maze, op. cit., p. 320.

[2] Ibid.

Nevertheless, the magnitude of the problems, the political maneuvers involved in practical negotiations and all of the other relevant problems should not be discouraging. Perhaps enough proposals have been suggested in the 1950's and 1960's. What is needed is an agreement among economists as well as policy makers on what is the trouble and what would be the best or at least the most acceptable and practical method of attacking it.

CHAPTER VII

A LOOK INTO THE DATA

In this chapter an attempt is made to compare the behavior of different countries with respect to their holdings of reserves relative to their imports based on the comprehensive data published by the IMF. Unfortunately, the data are not always comparable, not only because of possible different reporting practices in various countries, but also because of the split personalities of monetary authorities in different countries. What follows is not claimed to be a perfectly valid comparison; yet such an attempt to derive patterns of behavior is worthwhile, partly because no such attempts have been made.

In addition a set of correlation analyses will be tried to see the degree of correlation between international trade, world reserves, world gross product, and passage of time. The objective of this analysis is to see whether variations in the volume of international reserves account for changes in international trade, and if so, to what extent, or whether, there are other factors such as world production whose variations can also be correlated to the changes in the volume of international

trade. The period under observation covers the years between 1948 and 1966 inclusive.

Reserve Behavior of Selected Countries

In addition to the eleven industrialized countries (the Group of Ten and Switzerland) other countries from Europe as well as other continents were selected at random from the International Financial Statistics published monthly by the International Monetary Fund. The countries selected (in addition to the Group of Eleven) are: Australia, New Zealand, Denmark, Norway, Austria, Greece, Turkey, Argentina, and Venezuela. Thus the sample covers twenty countries. For each country data were taken pertaining to their imports and international reserves for the years 1948 through 1966. The study thus covers a period of approximately two decades.

One of the significant reasons for holding of international reserves by these countries is assumed to be for use either in normal transactions and financing of their imports or for "rainy day" use as a means of international settlements. There are, of course, speculative factors also involved; yet they do not consistently lend themselves to measurement. Having assumed that international reserves are held partly for the purpose of making international settlements, the percentage ratio of reserves of each country to its imports, all measured in U.S. millions of dollars, is computed for all twenty

countries and for each year. The result of such computations are presented in Appendix III. It must be added here that not all countries reported their import data on a "cif" basis. The IMF, however, has adjusted such data to include freight and insurance, and IMF adjustments are taken as they stand without questioning their validity.[1]

Table 9 presents the maximum and the minimum reserve-imports percentage of these countries in order of magnitude. It shows that the maximum percentage of reserves to imports that any of these countries held between 1948 to 1966 was held by the U.S., the minimum percentage by Germany. This Table, however, can only reveal the range of the magnitude of reserve-import percentage; and as such, these percentages do not tell anything about the most frequent values. As a result, the Table cannot be relied upon as fully indicative of customary behavior. However, their mode of behavior can be derived statistically. Before this derivation is given a look into the data is necessary.

One can note clear patterns of behavior for most of the countries. All such patterns, however, may not be of immediate interest. Accordingly, in the following analysis, attention will only be focused on the aspects which seem to be most significant in relation to their

---

[1]For details see the 1966/67 Supplement to IFS.

TABLE 9

THE HIGHEST AND THE LOWEST PERCENTAGE OF INTERNATIONAL RESERVES TO IMPORTS FOR SELECTED COUNTRIES 1948-1966

Country	The Highest % of Reserves to Imports (1948-1966)	Country	The Lowest % of Reserves to Imports (1948-1966)
U.S.	345.0	Switzerland	80.2
Switzerland	191.8	U.S.	50.6
Australia	122.1	Venezuela	45.9
Turkey	90.5	Australia	39.1
Argentina	84.0	Belgium	30.8
Venezuela	78.4	Italy	29.8
Germany	77.6	Canada	24.5
Austria	73.4	Japan	19.3
Italy	72.7	Netherlands	18.3
Canada	59.0	Turkey	17.6
France	56.9	Sweden	16.9
Japan	54.3	Greece	15.9
Belgium	54.2	U.K.	15.0
Greece	52.6	France	13.8
New Zealand	52.4	Norway	13.3
Netherlands	51.9	Austria	12.6
U.K.	46.8	Denmark	11.3
Sweden	35.2	Argentina	10.4
Denmark	24.6	New Zealand	8.8
Norway	21.2	Germany	7.0

Source: Data in Appendix III.

relevance to the problem of international liquidity. In the period covered:

1. The percentage ratio of reserves to imports for the U.S. has been generally declining with a maximum in 1949, and a minimum in 1966, excepting 1952, 1954, and 1957.[1] Furthermore, until 1962, the U.S. had always had a ratio greater than 100 per cent.

2. Next, Switzerland, until 1961 and with the exception of 1957, has shown a tendency to keep the percentage ratio of its reserves to imports somewhere above 100. Since 1962, however, it has had a percentage less than 100.

3. Surprisingly, the Netherlands, the country which has a higher average propensity to import than both the U.S. and Switzerland--and indeed is regarded to be among the countries having the highest average propensity to import[2]--has kept low international reserves relative to its imports. In this, it resembles Denmark and Norway --both of which are among the countries with high average propensity to import.

4. In the case of France two waves of increase in

---

[1]The exceptions in 1952 and 1957 in which the ratio of reserves to imports for the U.S. has not declined might be attributed respectively to the War of Korea and the Suez Crisis which may have caused an outflow of capital from Europe and other continents to the U.S. The exception of 1954 cannot be easily attributed to any one factor.

[2]Snider, op. cit., p. 468.

the reserve import percentage can clearly be observed. (See Appendix III.)

a) 1949 to 1955

b) 1958 to 1964 (excepting a decrease in 1962)

During the same period that the U.K. and France both show a decrease in their official holding of reserves (1955 to 1956), the U.S. records an increase. This can be attributed to the uncertainty which prevailed before the Suez Crisis reached its peak that might have caused capital flights from the U.K. and France to the U.S. The pattern of French behavior shows a range of variations much smaller than that of the U.S. Furthermore, it shows an upward trend, with most of the increase in reserve-import percentage concentrated after 1958 (the year in which the large U.S. balance of payments deficits began).

5. The percentage of U.K. reserves[1] to her imports has undergone more violent fluctuations than that of the U.S. without showing too much of a decrease when compared with 1948 percentage ratio. Moreover, the highest reserves to imports percentage that the U.K. has held has at best been less than half of that of the U.S.

6. More generally, if one recognized the following three classes of percentages:

---

[1]These reserve holdings are not net; for the U.K. borrowings for reserve purposes have sometimes been in excess of reserves held.

a) from 7 to 20 per cent

b) from 20 to 40 per cent

and c) from 40 to 60 per cent or above,

he would find Denmark, Norway, and the Netherlands under category a); Canada, Japan, Sweden, Greece, under category b); and finally countries such as Switzerland, the U.S., France, in category c). This reveals that the selected countries have varying traditions in this context or differing degrees of responsiveness in regard to their needs for international economic relations. The outstanding feature of this type of analysis, which incidentally contradicts the commonsense impression, is that:

a) Countries with high average propensity to import (some Scandinavian countries) are less prone to keep high reserve-import percentages and perhaps less cautious as to the amount of their reserve holding relative to their international trade.

b) Countries have different central tendencies around a percentage value; Denmark and Switzerland almost at the extremes of the range of variations, and other countries falling in between.

The difference in their habits of holding reserves can be one guide for those who are looking for a practical solution of the problem of international liquidity through reserve creation. It can be a guide in that no one type of behavior is recognizable, and that no one rule may

appropriately be imposed on different countries. Neither may it suit the different degrees of need in different countries.

Now, in order to see the mode of past behavior (or performance) or the central tendency to which a country has most adhered to, a glance at Table 10 is necessary. In order to distinguish the mode of behavior in the past, each selected country's performance is taken into account through examination of the percentage of reserves to imports. Of course, what countries have actually come up with is not necessarily indicative of what they have desired. Therefore these percentages have been taken for what they signify objectively, and not as a sign of a country's willingness to maintain certain levels. An attempt has then been made to pick up the mode of performance: namely, the percentage which has most frequently occurred in the case of each country. A clear mode could not always be discerned since in many cases the countries had a "bimodal" percentage,[1] that is, holding two percentages fairly consistently. Table 10 as arranged is, in effect, a digest to the statistical Appendix III.

One final step in deriving the mode of behavior has been taken; that is to establish an entry form for the

---

[1]In a few cases, like Greece, Austria and Switzerland, it was observed that a clear first mode could not be recognized as there were two modes.

TABLE 10

BIMODAL FREQUENCY DISTRIBUTION OF THE PERCENTAGE RATIO OF RESERVES TO IMPORTS FOR 20 SELECTED COUNTRIES

Country	% of First & 2nd Modes	Frequency in Years	Country	% of First & 2nd Modes	Frequency in Years
Japan	30 to 39.9	6	Venezuela	50 to 59.9	9
	40 to 49.9	3		70 to 79.9	4
Australia	50 to 59.9	6	Germany	50 to 59.9	5
	40 to 49.9	4		60 to 69.9	4
Canada	30 to 39.9	11	Austria	50 to 59.9	5
	40 to 49.9	6		60 to 69.9	4
				10 to 19.9	4
Italy	30 to 39.9	5			
	50 to 59.9	3	Sweden	20 to 29.9	14
	60 to 69.9	3		10 to 19.9	3
Denmark	10 to 19.9	15	Norway	10 to 19.9	16
	20 to 29.9	3		20 to 29.9	3
Belgium	40 to 49.9	11	U.S.	100 to 199.9	8
	30 to 39.9	7		200 to 299.9	4
New Zealand	20 to 29.9	6	Switzerland	100 to 199.9	13
	30 to 39.9	5		90 to 99.9	3
				80 to 89.9	3
Greece	30 to 39.9	7			
	40 to 49.9	4	Netherlands	20 to 29.9	6
	10 to 19.9	4		30 to 39.9	6
Turkey	30 to 39.9	5	France	50 to 59.9	6
	50 to 59.9	4		10 to 19.9	6
Argentina	20 to 29.9	5	U.K.	20 to 29.9	14
	30 to 39.9	4		10 to 19.9	3

Source: Personal derivation from Appendix III. The modes shown for each country are those occurring most frequently.

percentages given in Table 10. In order to accomplish this, each "year" for each country has been referred to as a "case." Thus there are altogether three hundred and eighty such cases, as twenty countries are involved and for each country a period of nineteen years is under observation (20 X 19 = 380). Then one can have the entry form as depicted in Table 11.

It is now easy to see to what percentage countries have most frequently adhered. One can summarize the results of the Entry Form in the form of a frequency distribution arranged in order of magnitude as shown in Table 12.

Looking at Table 12 it can now be established that most selected countries have adhered to a reserve-import percentage of 30 to 39.9; the next mode of behavior is 20 to 29.9; the third is 10 to 19.9; finally the next two items in order of magnitude of their case frequencies are 50 to 59.9 per cent and 40 to 49.9 per cent. The conclusion which can be derived is interesting. It has been beyond the control or willingness of many of the twenty selected countries to keep reserve-import percentages as high as 100 to 199.9 or even at the level of 70 to 79.9 per cent. Equally important is the behavior of the countries to have a central tendency around 20 to 39.9 per cent, but less around 10 to 19.9 per cent and 50 to 59.9 per cent of reserve-import ratios.

TABLE 11

ENTRY FORM FOR PERCENTAGES OF RESERVE-IMPORTS FOR 20 SELECTED COUNTRIES IN TERMS OF THEIR BIMODAL BEHAVIOR--1948-1966

10 to 19.9 % Countries & Frequencies*		20 to 29.9 % Countries & Frequencies*		30 to 39.9 % Countries & Frequencies*		40 to 49.9 % Countries & Frequencies*		50 to 59.9 % Countries & Frequencies*	
U.K.	3	U.K.	14	Netherlands	6	Greece	4	France	6
France	6	Netherlands	6	Argentina	4	Belgium	11	Austria	5
Norway	16	Norway	3	Turkey	5	Canada	6	Germany	5
Sweden	3	Sweden	14	Greece	7	Australia	4	Venezuela	9
Austria	4	Argentina	5	New Zealand	5	Japan	3	Turkey	4
Greece	4	New Zealand	6	Belgium	7			Italy	5
Denmark	15	Denmark	5	Italy	5			Australia	6
				Canada	11	Total	28		
Total	51	Total	53	Japan	6			Total	40
				Total	56				

TABLE 11 Contd.

60 to 69.9 % Countries & Frequencies*		70 to 79.9 % Countries & Frequencies*		80 to 89.9 % Countries & Frequencies*		90 to 99.9 % Countries & Frequencies*		100 to 199.9 % Countries & Frequencies*		200 to 299.9% Countries & Frequencies*	
Austria	4	Venezuela	4	Switzer-land	3	Switzer-land	3	Switzerland	13	U.S.	3
								U.S.	8		
Total	4	Total	4	Total	3	Total	3	Total	21	Total	3

Source: Data presented in Table 10 above and Appendix III.

*Frequencies are stated in terms of years.

TABLE 12

A DIGEST TO TABLE 11
(Bimodal Percentages of Reserve-Imports)

Percentage of Reserves to Imports	Number of Cases	Per cent of Total
30 to 39.9	56	21.05
20 to 29.9	53	19.92
10 to 19.9	51	19.17
50 to 59.9	40	15.03
40 to 49.9	28	10.52
100 to 199.9	21	7.89
70 to 79.9	4	1.50
60 to 69.9	4	1.50
80 to 89.9	3	1.12
90 to 99.9	3	1.12
200 to 299.9	3	1.12
Total	266	100.0*

Source: Data presented in Appendix III.

*The total actually amounts to 99.94 per cent. The difference is due to rounding.

In addition to the measure of central tendency which was used above, namely mode, another measure of central tendency was used. This is mean. For each country the mean--or the average--value of the percentage of reserves to imports have been computed. These data are presented in Table 13. All such means give a mean for the sample equal to 48.33 per cent. This result does not closely correspond to the first three modal values (30 to 39.9 per cent, 20 to 29.9 per cent, and 10 to 19.9 per cent) of reserve-import percentage ratios presented in Table 12 above. It must, however, be remembered that

TABLE 13

MEAN VALUE OF PERCENTAGE RATIO OF RESERVE-IMPORTS
(1948-1966; 1948-57; 1958-66)

	1948-66	1948-57	1958-66
Japan	34.5	38.71	31.8
Australia	61.3	69.35	52.46
Canada	38.2	41.73	34.44
Germany	50.1	41.63	57.88
Austria	46.8	34.29	61.75
Sweden	24.1	25.97	22.20
Norway	18.0	16.74	19.56
Italy	51.0	36.81	63.74
Denmark	15.2	12.39	18.34
Belgium	42.4	43.99	40.73
New Zealand	26.5	33.55	18.78
Greece	32.7	33.45	32.00
Turkey	44.3	51.56	36.31
Argentina	37.3	43.87	30.00
Venezuela	58.2	56.73	60.01
U.K.	24.8	25.8	23.71
France	34.0	21.61	46.81
Netherlands	44.0	32.38	35.85
Switzerland	117.5	136.05	108.17
U.S.	165.7	225.64	99.24
Total	966.6	1022.25	893.78
Average*	48.33	51.11	44.68

Source: Data presented in Appendix III.

*All totals divided by 20 give the means.

means are, after all, simply arithmetic averages and not only are affected by individual extreme values, but also may not exist at all in reality. Table 13 not only shows the average percentage of reserves to imports that each country has held between 1948-66, 1948-57, and 1958-66, but also the overall percentages of reserve-imports for all selected countries for each of these periods. Thus one can assert that the selected countries have held their reserves, on the average, equal to 48.33 per cent of their imports. Assuming that this figure is 50 per cent, it suggests that countries have had access to no more than, on the average, half of the reserves necessary for fulfilling their needs. It is, therefore, not surprising that for financing of the other half they have had to resort to ad hoc credit facilities.

The pattern of past performance need not necessarily continue into the future. Yet, it is interesting from the standpoint of showing performance in retrospect, whether or not the situation has been desirable to these countries and whether it has been within or beyond their control. Now that some of the general facts about the behavior of selected countries with respect to their holdings of international reserves have been examined, one can look further into the data to see if any other features can be determined from past records. Before this a broad note is pertinent.

It can be observed from the above data that in the case of the U.S. and Switzerland, the percentage of their international reserves to their imports has been more than 100 for quite a number of years. This may well be attributed to a low average propensity to import in the case of the U.S. and the key position of its currency in the international reserves; and to capital inflows in the case of Switzerland which is usually thought by many countries to be a "safe" place for deposits.

Nevertheless, the U.S. and Switzerland are rather exceptional cases, and other selected countries showed, in general, a reserve-import percentage of less than 100 at all times, and less than 70 per cent in the majority of cases, with an over-all average close to 50 per cent. Thus the international liquidity for the free world as a whole has been less than adequate if it were to be measured in terms of import needs. What the data suggest are also supported in view of developments such as General Arrangements to Borrow, increases in the IMF quotas, stand-by credits, currency swap transactions, sale of Roosa bonds to foreign countries by the U.S., and other mutual credit agreements which have taken place among governments. It must be borne in mind that these developments have been at least partially in response to a feeling of inadequacy of international reserves; furthermore, it would seem that the international liquidity has been less than enough

despite all such developments.

Comparison of the Increase in International Trade and International Reserves

Between 1950 and 1966, the world official holdings of gold and foreign exchange reserves have increased by little over ten billion dollars. Of this increase, 5.6 billion was in gold, and 4.4 in foreign exchange, all expressed in U.S. dollars (Table 14); over the same period of time, all international reserves have increased by little over $16.5 billion, while the growth of the non-communist world trade, measured in terms of imports, was 132.3 billion dollars. (Table 25 below, column 2) A simple mathematical manipulation reveals that for the period of 1950-1966 the increase in international reserves has only been 12.47 per cent of the growth of international trade. This can be another measure of the inadequacy of the growth of international reserves. If the U.S. balance of payments deficit be restored in the future, further increase in international reserves will have to come either from Russia's gold sales--if it is not diverted into private hoards--, or from foreign exchange in some form other than U.S. dollars, or from newly mined gold or, finally from some new institutional arrangements.

TABLE 14

WORLD+ OFFICIAL HOLDINGS OF GOLD AND FOREIGN EXCHANGE
1950-1966
(Millions of U.S. Dollars)

(1)	(2)	(3)	(4)*
End of	Gold	Foreign Exchange	Total
1950	35300	19810	55110
51	35475	19165	54640
52	35745	19700	55445
53	36120	21400	57520
54	36700	22440	59140
1955	37370	22520	59890
56	37890	23480	61370
57	38705	23800	62505
58	38030	16965	54995
59	37880	16185	54065
1960	38030	18615	56645
61	38870	19175	58045
62	39275	19770	59045
63	40220	22040	62260
64	40845	23410	64255
1965	41850	22895	64745
66	40905	24275	65180

Source: for 1950 through 1957 the data in column (2) and (3) are taken from: IMF, International Financial Statistics, vol. 11, no. 12 (Washington, D. C., Dec. 1958), pp. 15-16 and for 1958 through 1966 from IMF, IFS, vol. 20, no. 8 (Washington, D. C., Aug. 1967), pp. 15-17.

+Excluding Communist bloc, and not including gold holdings of the Bank for International Settlements, the IMF, or the European Fund.

*(4) = (2) + (3).

Notes: The fall in gold holdings in 1959 can be attributed to the gold payments of the IMF members when their quotas were increased. The decline in foreign exchange holdings in the same year was the consequence of the liquidation of the European Payments Union, and the resulting settlements of claims.

Components of Country Reserves

Group of Eleven

Difference of behavior can also be recognized among the selected countries from the standpoint of the distribution of their international reserves among gold, foreign exchange, and reserve positions in the Fund. Although some economists (such as Roosa and Bernstein) hold that the present level of international reserves--gold, reserve positions in the Fund, and foreign exchange --is adequate, the growth of future reserves may not be sufficient for an expanding international economy.

Table 15 further reveals that the eleven large industrial countries have held more than 72 per cent of total international reserves from 1958 to 1966. Moreover, the eleven countries held, in June 1967, a little over 90 per cent of $40,420 million of world gold outside the communist bloc (Table 16). Clear patterns can be seen in the holding of gold relative to foreign exchange among these eleven countries. Japan, Canada, and Sweden had 15 to 40 per cent of their reserves in gold. Italy, Germany, and the U.K. had from 48 to 59 per cent of their reserves in gold. On the other hand, the U.S., Switzerland, the Netherlands, and France held 70 to 90 per cent of their reserves in gold.

There are also great differences among these countries in their holdings of foreign exchange relative to

TABLE 15

INTERNATIONAL RESERVES* OF ELEVEN SELECTED COUNTRIES, 1958-1966
(millions of U.S. dollars)

	1958	1959	1960	1961	1962	1963	1964	1965	1966
U.S.	22540	21504	19359	18753	17220	16843	16672	15450	14881
U.K.	3105	2801	3719	3318	3308	3147	2316	3004	3100
Belgium	1553	1306	1506	1813	1753	1940	2192	2304	2320
France	1050	1736	2272	3365	4049	4908	5724	6343	6733
Germany	5879	4790	7032	7163	6956	7650	7882	7429	8028
Italy	2184	3056	3251	3799	4068	3619	3824	4800	4911
Netherlands	1539	1442	1863	1958	1946	2102	2349	2416	2448
Sweden	516	478	528	736	801	758	964	972	1027
Switzerland	2063	2063	2324	2758	2871	3074	3120	3244	3324
Canada	2038	2029	1989	2276	2547	2603	2881	3027	2693
Japan	1062	1447	1949	1666	2022	2058	2019	2152	2119
11 countries	43529	42652	46792	48605	48541	48702	51943	53141	51584
all others	14026	14663	13423	16300	14304	17498	16467	16979	19926
world total	57555	57315	60215	62205	62845	66200	68410	70120	71510
%, 11 countries	75.6	74.4	77.7	78.1	77.2	73.5	75.9	75.7	72.1

Source: IMF, International Financial Statistics, Vol. 20, No. 8 (Washington, D. C., August 1967), p. 16.

*End of period; international reserves are defined by the IMF as: Gold, Reserve Positions in the Fund, and Foreign Exchange.

TABLE 16

INTERNATIONAL RESERVES OF ELEVEN SELECTED COUNTRIES, JUNE 1967
(in millions of U.S. dollars)

	Total Reserves	Gold	Foreign Exchange	Gold as % of Total Reserves	Foreign Exchange as % of Total Reserves
U.S.	14274	13169	739	92.2	5.17
U.K.	2834	1677*	1582*	59.1	55.82
Belgium	2457	1522	598	61.9	24.33
France	6688	5235	537	78.2	8.02
Germany	7794	4292	2411	55.0	30.93
Italy	4965	2412	1654	48.5	33.31
Netherlands	2471	1731	363	70.0	14.69
Sweden	1007	203	656	20.1	65.14
Switzerland	3239	2831	407	87.4	12.56
Canada	2630	1066	1112	40.5	42.28
Japan	2099	330*	1510*	15.7	71.93
11 countries	50458	36468	11568	72.2	22.92
all others	n.a.	3952	12042	n.a.	n.a.
world total	n.a.	40420*	23610*	n.a.	n.a.
%, 11 countries	n.a.	90.2	48.9	n.a.	n.a.

Source: IMF, International Financial Statistics, vol. 20, no. 8 (Washington, D. C., Aug. 1967), pp. 15-17. All percentages are computed personally.

*As of the end of the first quarter of the year; June data are not available yet, as a result, the world total of gold and foreign exchange is an approximation of the June, 1967 data.

total reserves. Japan, Sweden and the U.K. held 55 to 71 per cent of their reserves in foreign exchange; Canada, Italy, and Germany had an intermediate range of 30 to 42 per cent; and finally, other countries such as the U.S., France, and Switzerland kept much lower percentages of foreign exchange relative to their total reserves. It can be observed from the data that the range of variations in foreign exchange holdings of the eleven countries (5 to 71 per cent) is less than the range of variations of their gold holdings (15 to 92 per cent). On the average, all these countries held 22.92 per cent of their international reserves in foreign exchange in June, 1967.

Developing Countries

What about the countries outside the Group of Eleven? To look at the behavior of these countries from the standpoint of their holdings of foreign exchange and gold, twenty-two countries presented in Table 17 were chosen for which the data pertinent to these holdings were available in the IFS. Their holdings of foreign exchange and gold for every other year starting from 1951 to 1965 were then recorded; the 1966 data were also added to the Table to provide the most recent picture. Upon computing the percentage ratio of foreign exchange to their gold holdings, three categories of countries were recognizable: First, countries whose percentage ratio of foreign exchange to gold holdings was generally more than 100 per cent

TABLE 17

PERCENTAGE RATIO OF FOREIGN EXCHANGE TO GOLD HOLDING OF SELECTED COUNTRIES
(Foreign Exchange and Gold Holdings in Millions of U.S. Dollars)

COUNTRY	1951			1953			1955		
	F.E.+	G.H.+	% Ratio of F.E. to G.H.	F.E.	G.H.	% Ratio of F.E. to G.H.	F.E.	G.H.	% Ratio of F.E. to G.H.
Greece	128	4	3200	180	11	1630	199	11	1809
Iceland	8	1	800	15	1	1500	13	1	1300
Ireland	188	18	1044	216	18	1200	225	18	1250
Portugal	291	265	109	255	361	70	244	428	57
Turkey	66	151	43	69	143	48	67	144	46
Argentina	253	267	94	160	372	43	85	372	22
Brazil	198	319	62	284	321	88	168	323	52
Chile	10	45	22	26	42	61	38	44	86
Colombia	77	48	160	104	86	120	50	86	58
Mexico	46	208	22	61	158	38	276	142	194
Uruguay	2	221	9	64	227	28	*?	216	*
Venezuela	*	373	*	104	373	27	122	403	30
Iran	58	138	42	48	137	35	67	138	48
Iraq	114	*	*	181	*	*	286	*	*
Israel	33	*	*	33	*	*	81	*	*
Kuwait	*	*	*	*	*	*	*	*	*
Saudi Arabia	*	*	*	*	*	*	*	*	*
Egypt	783	174	450	554	174	3100	467	174	268
India	1698	247	687	615	247	2489	1619	247	655
Pakistan	611	27		258	38	6789	322	48	670
Philippines	240	7	2260	231	9	2566	140	16	875
Thailand	245	114	210	188	114	16	186	112	166

Source: International Monetary Fund, International Financial Statistics, Vol. 11, No. 12, December 1958, p. 15 for gold holding and p. 16 for foreign exchange for 1951-1957; for 1959-1965 from IMF, IFS, Vol. 20, No. 8, August 1967, p. 16 for gold holding and p. 17 for foreign exchange.

+F.E. = Foreign Exchange (elements of international reserves);
+G.H. = Gold Holdings. * = not available.

TABLE 17 (continued)

COUNTRY	1957 F.E.	1957 G.H.	1957 % Ratio of F.E. to G.H.	1959 F.E.	1959 G.H.	1959 % Ratio of F.E. to G.H.	1961 F.E.	1961 G.H.	1961 % Ratio of F.E. to G.H.
Greece	183	13	1407	185	26	711	164	87	188
Iceland	15	1	1500	10	1	1000	23	1	2300
Ireland	234	18	1300	299	18	1661	317	18	1761
Portugal	226	461	49	260	548	47	249	443	562
Turkey	172	144	119	11	133	8	62	133	46
Argentina	185	126	146	220	56	392	196	190	103
Brazil	150	324	46	40	327	12	185	285	64
Chile	6	40	15	86	42	204	26	48	54
Colombia	83	62	133	141	71	198	61	88	69
Mexico	272	180	151	271	142	190	259	112	231
Uruguay	*	180	*	12	180	6	25	180	13
Venezuela	726	719	100	65	655	9	141	401	35
Iran	107	138	77	73	140	52	79	130	60
Iraq	242	*	*	212	84	252	130	84	154
Israel	79	*	3950	116	2	5800	263	10	2630
Kuwait	*	*	*	*	*	*	40	43	93
Saudi Arabia	*	*	*	156	18	866	159	65	244
Egypt	277	188	140	131	174	75	29	174	166
India	695	247	281	567	247	229	418	247	169
Pakistan	242	49	483	248	50	496	221	53	416
Philippines	65	6	1083	81	9	900	17	27	62
Thailand	217	112	193	204	104	196	339	104	325

TABLE 17 (continued)

COUNTRY	1963 F.E.	1963 G.H.	1963 % Ratio of F.E. to G.H.	1965 F.E.	1965 G.H.	1965 % Ratio of F.E. to G.H.
Greece	200	77	259	158	78	202
Iceland	31	1	3100	50	1	5000
Ireland	378	18	2105	378	21	1733
Portugal	330	497	66	418	576	72
Turkey	63	115	54	25	116	15
Argentina	192	78	246	170	66	257
Brazil	66	150	44	442	63	701
Chile	34	43	79	94	44	213
Colombia	44	62	70	95	35	271
Mexico	354	139	261	325	158	205
Uruguay	23	174	13	35	155	22
Venezuela	306	401	76	404	401	10
Iran	87	142	61	87	146	59
Iraq	194	98	197	109	109	100
Israel	449	60	748	575	56	1028
Kuwait	50	48	104	60	52	115
Saudi Arabia	422	78	541	635	73	869
Egypt	42	174	24	54	139	38
India	360	247	145	319	281	113
Pakistan	239	53	450	168	53	316
Philippines	82	28	292	147	38	386
Thailand	461	104	443	624	96	650

TABLE 17 (continued)

(1) COUNTRY	1966 (2) FOREIGN EXCHANGE	(3) GOLD HOLDING	(4) % RATIO OF FOREIGN EXCHANGE TO GOLD $\frac{(2)}{(3)} \times 100$
Greece	128	45	106
Iceland	53	120	5300
Ireland	471	1	2147
Portugal	460	23	71
Turkey	29	643	28
Argentina	132	102	157
Brazil	352	84	782
Chile	126	45	280
Colombia	97	45	373
Mexico	369	26	338
Uruguay	50	104	34
Venezuela	313	146	78
Iran	108	401	83
Iraq	195	130	185
Israel	553	105	1202
Kuwait	85	46	126
Saudi Arabia	656	67	950
Egypt	63	69	67
India	364	93	149
Pakistan	146	243	275
Philippines	122	53	277
Thailand	808	44	870

Source: International Monetary Fund, International Financial Statistics, Vol. XX, No. 7, August 1967, p. 17 for column (2); and p. 15 for column (3); column (4) is based on personal calculations.

(sometimes as high as 1800 per cent) such as Greece, Iceland, and Ireland.

Second, countries in which this percentage was generally less than 100 per cent, such as Turkey, Iran, and Venezuela.

Third, countries in which the percentage ratio of foreign exchange to gold holdings was less than 100 per cent at times, and more than that at other times, such as Argentina, Colombia, Mexico, and Egypt.

Although these data do not suggest too much in the way of a derivation of a pattern of behavior, they are indicative that there are significant differences among these countries in this respect.

Correlation Analyses

The volume of international trade in any given year depends on many factors among which are time, the availability of international reserves, the production of the countries participating in trade, their willingness to participate or not to participate in trade depending on the principle of comparative advantage and/or other considerations such as the costs of transportation, the average and marginal propensity to import and export with respect to their national income, the degree of restriction inherent in the circumstances of the time in terms of quotas, controls, limitations, tariffs, the stage of economic growth of the country, the degree and acuteness

of need. The number of factors affecting international trade are perhaps countless; they extend also beyond mere economic factors.

Among the factors affecting international trade, some lend themselves to quantitative measurement, and some do not. For those that do lend themselves to quantitative analysis, sometimes past records are available and sometimes not.[1] One of the objectives, taking all of these factors into account, of the rest of this Chapter is to look into the available or projectable data with the hope of achieving some quantitative measurements of the relation between two or more variables.

Few studies have ever been undertaken in this direction, thus their assertions have, for the most part, been based upon theoretical or common sense grounds.

In order to introduce the quantitative measurements that the rest of this Chapter attempts to undertake, it would seem advisable to set some functional relationships to form a framework of analysis.

The sign "f" would be used to denote "a function of" which is simply a mathematical way of saying "it depends on." Thus one can recognize the following functions.

---

[1] Sometimes, when data are not available it is possible to estimate and project the needed data, but at other times it is not.

1. World production of gold = f (time)
2. International reserves in the form of foreign exchange = f (time)
3. International reserves[1] = f (time)
4. International trade = f (time)
5. International trade = f (reserves)
6. International trade = f(reserves with one year time lag)
7. International trade = f(world gross product)
8. International trade = f(world gross product with one year lag)
9. International trade = f(reserves, world gross product)
10. International trade = f(lagged reserves, lagged world gross product)
11. International trade = f(reserves, world gross product, and time)
12. International trade = f(lagged reserves, lagged world gross product, and time)

Each of these will form a separate subsection.

World Production of Gold and Time

Based on the data presented in Table 1 of Chapter II above a scatter diagram was plotted, and, as discussed there, a linear relation did not exist between world gold production and time (measured in years) for the years 1945

---

[1]International reserves refer to gold, foreign exchange reserves, and drawing rights on the IMF. For short, the word "reserves" will be used to denote the international reserves.

through 1966. A "second degree curve" seemed to best fit the data, and the following regression equation was obtained: $Y = 757.126 - 2.083\ t + 1.738\ t^2$.

In this formula Y represented gold production, and t represented[1] year(s). The figures in the formula were simply coefficients of the trend line that the formula presented. Attention will now be focused on the computation of the coefficient of correlation between world gold production and the time element as measured in years. This has been shown to be .98, meaning that a strong positive correlation does exist between production of world gold and time. The square of the correlation coefficient, sometimes referred to as the "coefficient of determination" enables one to state the relative amount of variation in the dependent variable (gold in the case of this subsection) which can be explained by the estimating equation.[2] Stated differently, the coefficient of determination is equal to the proportion of the Y (gold) variance explained by the influence of t (passage of time, measured in terms of years). If the coefficient of correlation be designated by r, the usual notation in many statistics texts, an r value of 0.98, therefore, indicates that the least-squares

---

[1]World is used here and in later subsections in the same sense that the IMF has used it, namely, excluding the Soviet bloc.

[2]Frederick E. Croxton and Dudley J. Cowden, Applied General Statistics (Englewood Cliffs, N. J.: Prentice-Hall, Inc., Second edition, 1960), p. 455.

regression of Y on t accounts for 96 per cent of the variance in Y.[1]

The exact direction of causation is hard to establish, as correlation does not mean causation.[2] Keeping this in mind, the above regression equation gives the strong coefficient of determination, .96, meaning that 96 per cent of variations in gold production can be explained by the passage of time. As mentioned above, correlation does not mean causation; yet, if on theoretical bases, one assumes that as time passes there are increases in world gold production, then such increases can be estimated by looking at the other variable (time) to which it is closely correlated.

When the coefficient of correlation is so high, there is no need of showing how closely the estimates of the gold production for the last few years approach the

---

[1]Lee J. Johnston, Econometric Methods (New York: McGraw-Hill Book Company, Inc., 1963), p. 31.

[2]"The coefficient of correlation must be thought of, not as something that proves causation, but only as a measure of co-variation." Croxton and Cowden, op. cit., p. 469. Any one of the following situations may exist with respect to correlation. 1. "A variation in either variable may be caused (directly or indirectly) by a variation in the other. . . . 2. Co-variation of the two variables may be due to a common cause or causes affecting each variable in the same way, or in opposite ways. . . . 3. The causal relationship between the two variables may be a result of interdependent relationships. . . . 4. The correlation may be due to chance. . . ." Ibid., pp. 469-470. The portions of paragraphs quoted here are all presented in italics by their authors.

actual values given in the IFS. Yet, the following table can provide an approximation of the correspondence for a few years, in addition to serving as a projection for the next decade.

TABLE 18

ESTIMATES OF THE WORLD PRODUCTION OF GOLD: 1960-1974
(in millions of U.S. dollars)

(1) Year	(2) Estimate of World Gold Production	(3) Actual World Gold Production as Reported by IFS
1960	1168.726	1178
61	1223.997	1215
62	1282.744	1300
63	1344.967	1354
64	1410.666	1400
1965	1479.840	1440
66	1552.492	1542
67	1628.619	*
68	1708.222	*
69	1791.301	*
1970	1877.856	*
71	1967.887	*
72	2061.394	*
73	2158.377	*
74	2259.836	*
1975	2362.771	*
76	2470.182	*

Source: Data in column 2 are estimates on the basis of the use of the regression equation obtained previously: $Y = 755.126 - 2083t + 1.738t^2$; data in column (3) are taken from Table 1 in Chapter II above.

* = not available yet.

Foreign Exchange Reserves and Time

Table 19 shows total foreign exchange reserves for the years 1948 through 1966. On the basis of the data in this Table, a scatter diagram was plotted, and a straight line appeared to best fit the data. The regression equation obtained for this straight line is:

$$Y = 11068.33 + 655.245\ (t)$$

In this equation Y designates world foreign exchange, t designates time, and the figures are coefficients of the regression[1] equation.

Again, the volume of foreign exchange is taken to be a function of time,[2] and the above equation represents its functional relationship. The coefficient of correlation is .88, and coefficient of determination is .79, indicating

---

[1]The term "regression," as Croxton and Cowden mention, "entered statistical literature as a result of the use of correlation by Galton to study biological regression (that is, the tendency to revert to a common type or average). Since correlation analysis is applied to many types of problems, the term 'estimating' seems more appropriate." Croxton, op. cit., footnote to p. 454. Despite this assertion, in this study the term regression will be used since more people are accustomed to it.

[2]Volume of foreign exchange is not only a function of time, but also a function of the willingness of other countries to accept deficits in each other's balance of payments. This latter part, however, can not always be measured as it varies depending on international confidence, the size of deficit, the willingness of other countries to accept the deficit of the deficit countries, etc. In this section, attention is focused only on the relation of foreign exchange and time to see how much of variations in the supply of foreign exchange can be explained by passage of time.

TABLE 19

INTERNATIONAL LIQUIDITY: FOREIGN EXCHANGE, 1948-1966
(in millions of dollars)

Year	Foreign Exchange	Year	Foreign Exchange
1948	13365	1958	17140
49	10390	59	16470
50	13290	60	19030
51	13720	61	19645
52	14245	62	20020
1953	15565	1963	22350
54	16675	64	23860
55	17015	65	23860
56	17820	66	24275
57	17025		

Source: International Monetary Fund, International Financial Statistics, Supplement to 1965,66 Issues, p. vii for the years 1948-1964 inclusive; for 1965 and 1966 from IFS, Vol. 20, No. 8, August 1967, p. 17.

that passage of time could account for no more than 79 per cent of the variance in foreign exchange. Table 20 provides projections for foreign exchange in the next decade.

International Reserves and Time

Based on the data presented in column (3) of Table 25 below, a scatter diagram was plotted but a linear relationship did not seem to fit the data of international reserves. Application of a second degree curve gave better results and the following regression equation was derived:

$$Y = 55805 - 70.60t + 56.54t^2$$

TABLE 20

ESTIMATES OF WORLD FOREIGN EXCHANGE 1967-1976
(in millions of U.S. dollars)

Year	Foreign Exchange	Year	Foreign Exchange
1967	24173.230	1972	27449.455
68	24828.475	73	28104.700
69	25487.768	74	28759.946
70	26138.965	75	29415.190
71	26794.210	76	30070.435

Source:: Personal Computations on the basis of the regression equation of the previous subsection.

In this formula Y represents total international reserves, and t represents year(s). The figures in the formula were simply coefficients of the trend that the formula presented. The coefficient of correlation for the relation between total international reserves and time was .88. The square of this, coefficient of determination, was .77 indicating that passage of time could count for no more than 77 per cent of the variance in international reserves. If one looks at the components of international reserves--gold, foreign exchange, and drawing rights on the IMF--one cannot safely expect that the U.S. and the U.K.'s balance of payments deficits, which count for part of the key currency element of international reserves, will be added indefinitely from year to year. Hence, a not very high coefficient of correlation. Based on the above regression equation, the following Table provides projections

for foreign exchange in the next decade. This, however, should be taken as an approximation since in the final analysis, the expansion of some elements of international reserves (such as key currencies) will depend on the willingness of the key currency countries to expand this element and on the international confidence placed in them.

TABLE 21

ESTIMATES OF INTERNATIONAL RESERVES 1967-1976
(in millions of U.S. dollars)

Year	International Reserves	Year	International Reserves
1967	72885	1972	84094
1968	74877	1973	86963
1969	77011	1974	89381
1970	79259	1975	92194
1971	81620	1976	95121

Source: Personal computations on the basis of the relevant regression equation in this subsection.

International Trade and Time

Based on the data presented in Table 2 of the second chapter a scatter diagram was plotted, and again a linear relation did not exist between world trade[1] and time. Thus using a non-linear equation, the following results were obtained:

$$Y = 93468.17 + 7091t + 630.65t^2$$

[1] In this and the following sections, any time world trade is used, unless otherwise mentioned, it is meant to refer to the imports (cif) of the non-communist bloc as presented in the IFS.

In this equation Y designates world trade and t represents time. More specifically, international trade is taken to be a function of time, and the above equation represents the functional relationship. On the basis of this regression equation, international trade (as measured by imports) can be projected for the year 1976, a decade from now. This turned out to be 425176 million of U.S. dollars. The following table presents the estimate of world trade for the years 1967 through 1976 inclusive.

TABLE 22

PROJECTION OF WORLD TRADE, 1967-1976
(in millions of U.S. dollars)

Year	Trade	Year	Trade
1967	208,267	1972	316,172
1968	227,328	1973	341,533
1969	247,649	1974	368,154
1970	269,230	1975	396,035
1971	292,071	1976	425,176

Source: Personal computations on the basis of the regression equation in this subsection.

It must be pointed out that the coefficient of correlation between international trade and time, unlike world gold production, did not show a strong positive correlation as it was only .77. The square of this coefficient of correlation, that is, coefficient of determination, is .59, meaning that passage of time accounts for no more than 59 per cent of the variation in international trade.

This result should not be surprising, as one can show, on theoretical grounds, that the volume of international trade is related not only to the time element, but also to the availability of international reserves, world gross product, tariffs, quotas and other restrictions and/or freedom of trade. Due to problems of measurement and lack of statistics some of these variables cannot be satisfactorily measured for the world as a whole. However, the variables which lend themselves to quantitative measurements could be analyzed statistically.

On the basis of the data presented in the following Table, one can compute the percentage ratio of international reserves to international trade (which are stated in millions of U.S. dollars). This ratio has a general downward trend, meaning that every year the volume of international reserves forms a smaller proportion of world trade. This is another way of saying that the growth of world reserves has been less than the growth of international trade, and as the data in the following Table suggest, while reserves were 92.7 per cent of world imports in 1950, in 1966 they were only 37.3 per cent of the world imports, and may go down still further (Table 24).

International Trade and International Reserves

Since both of these variables are projected approximately for the next decade, no more regression equations and projections will be made for these two variables from

TABLE 23

WORLD TOTAL RESERVES, WORLD IMPORTS, AND THE PERCENTAGE RATIO OF RESERVES TO IMPORTS 1950-66
(Columns (2) and (3) in Millions of U.S. Dollars)

Year (1)	Total Reserves* (2)	World Trade: Value of Imports (cif) (3)	% Ratio of Reserves to World Trade (2)/(3)
1950	55000	59331	92.7
51	54400	81390	66.8
52	55050	80186	68.6
53	57100	76563	74.5
54	58750	79596	73.8
1955	59500	88968	66.8
56	60900	98122	62.0
57	66250	107010	58.1
58	57555	100800	57.0
59	57315	106700	53.7
1960	60215	119400	50.4
61	62205	124600	49.9
62	62845	132400	47.4
63	66200	143600	46.1
64	68410	160800	42.5
1965	70120	175000	40.0
66	71510	191700	37.3

Source: Data in column 2 are from: IMF, International Financial Statistics, Vol. 11, No. 8, Aug. 1958, p. 14 for the years 1950 through 1957; for 1958 through 1966 from IFS, Vol. 20, No. 8, August 1967, p. 16; data in column 3 are taken from Table 2 above; data in column 3 are personal computations.

*Total reserves = gold, reserve positions in the Fund, and Foreign Exchange, end of period.

here on. The coefficients of correlation will, however, be introduced. For the period under observation (1950-1966) the coefficient of correlation between the above mentioned two variables was .94. The square of this

TABLE 24

PERCENTAGE RATIO OF THE ESTIMATES OF WORLD TOTAL RESERVES AND OF WORLD IMPORTS
(columns (2) and (3) in millions of U.S. dollars)

(1) Year	(2) Estimates of Total Reserves	(3) Estimates of World Trade	(4) % Ratio of (2) and (3)
1967	72885	208267	34.9
68	74887	227328	32.9
69	77011	247649	31.0
70	79259	269230	29.4
71	81620	292071	27.9
1972	84094	316172	26.5
73	86963	341533	25.4
74	89381	368154	24.2
75	92194	396035	23.2
76	95121	425176	22.3

Source: Data in column (2) are from Table 21 above; data in column (3) are from Table 22 above; data in column (4) are personal computations.

coefficient, namely, coefficient of determination, was .89, meaning that variations in international reserves account for no more than 89 per cent of the variance in international trade. Interestingly enough, it was found that variations in international reserves, as compared with the passage of time, can account for more variations in international trade as the comparison of the coefficient of determination of this subsection (.89) and that of the previous subsection (.59) can show.

International Trade and International Reserves with One Year Time Lag

A variable may not show a high degree of correlation with another if they are both pertinent to the same year. For example, it may be that a consumer's income of the last year will affect his consumption this year and his present year's income would affect his next year's consumption. Therefore, it is sometimes argued that introduction of a dynamic element in the form of a year time lag may increase the degree of correlation between variables.

To test the effect of the introduction of a dynamic element with respect to the international trade and international reserves, the data pertinent to international trade of each year were correlated with the international reserves of the preceding year. The objective in this test was to see whether international trade of each year was correlated more to the international reserves of its preceding year than to the international reserves of the same year or not.

Upon computing the coefficient of correlation between international trade of each year and international reserves of its preceding year for the period of analysis (1950-1966), the coefficient of correlation turned out to be .93. The square of this, the coefficient of determination, .88, indicates that variations in the international reserves of each year account for 88 0er cent of the variance in international trade of the succeeding years for 1950-1966.

If these results were compared with the results of the correlation in the previous subsection in which a time lag of one year was not introduced, it could be observed that the two coefficients of correlation are very close to each other leading to close coefficients of determination (.88 and .89). The result of this test is interesting. Introduction of a time lag of one year does not greatly change the coefficient of correlation between international trade and international reserves as these were respectively .94 (without time lag) and .93 (with time lag).

International Trade and World Gross Product

Based on the data presented in Table 25 a coefficient of correlation was computed for the above variables in the period under observation. This was .97, a high positive correlation. The square of this, coefficient of determination, was compared with the coefficients of determinations in the previous three subsections: .59, .89, .88 respectively, it could be observed that variations in world gross product can explain a larger percentage of variations in international trade than passage of time, international reserves, and one year-lagged international reserves. The high degree of positive correlation between international trade and world product is a support of theoretical assertions that production of goods and services in different countries has a closer relation with the international trade than international reserves.

TABLE 25

RAW DATA FOR SIMPLE AND MULTIPLE CORRELATIONS
(in millions of U.S. dollars)

(1) Year	(2) I.T.+ (imports)	(3) I.R.+	(4) I.R.+ (one year lag)	(5)* W.G.P.+	(6) W.G.P.+ (one year lag)
1950	59331	55000	53450	697723	660009
51	81390	54400	55000	744867	697723
52	80186	55050	54400	773153	744867
53	76563	57100	55050	810296	810868
1955	88968	59500	58750	876870	820296
56	98122	60900	59500	905157	876870
57	107010	61750	60900	933441	905157
58	100800	57555	61750	942870	933441
59	106700	57315	57555	999442	942870
1960	119400	60215	57315	1046585	999442
61	124600	62205	60215	1084300	1046585
62	132400	62845	62205	1140872	1084300
63	143600	66200	62845	1197447	1140872
64	160800	68410	66200	1235159	1197447
1965	175000	70120	68410	1272874	1235159
66	191700	71510	70120	1310589	1272874

Source: Figures in column (2) are taken from column (3) of Table 23 above; data in column (3) are taken from column (2) of the same Table; data in column (4) are from column (3) of this Table, with the exception of the first figure which is from IMF, IFS, Vol. VII, No. 8, August 1953, p. 15; data in column (5) are computations based on: United Nations, Statistical Yearbook, 1964, p. 543 and on: Mikoto Usui and Everett Hagen, World Income, 1957 (Cambridge, Mass.: Massachusetts Institute of Technology--Center for International Studies, 1959), p. 25; data in column (6) are from column (5) of this same table with one year lag.

*At constant prices

+I.T. = International Trade; I.R. = International Reserves; W.G.P. = World Gross Product

International Trade and World Gross Product with One Year Time Lag

Again, to test the effect of the introduction of a year time lag in the world gross product upon international trade another correlation analysis was undertaken. In this correlation the data pertinent to international trade of each year were correlated with the world gross product figures of their preceding years. The objective was to test the effect of the introduction of a one year time lag upon the results of correlation presented in the preceding subsection. The coefficient of correlation for these two variables was .97, or more specifically, .97029, which when compared with the exact coefficient of correlation of the previous subsection, .97009, shows very minor improvement. Coefficient of determination for this set of data was .94. Thus introduction of a one year time lag did not in a statistical sense change the results of the correlation.

International Trade, International Reserves, and World Gross Product

To carry the statistical test one step further another correlation analysis was applied to see if the introduction of more than one variable such as world gross product would change the results of correlation already obtained in the above subsection. Upon the application of a multiple correlation to these variables, the coefficient of correlation was .97 for the period under

observation. The square of this, the coefficient of determination, was .95, indicating that variations in both international reserves and world gross product account for 95 per cent of the variance in international trade. It is pertinent to note that the above multiple correlation was applied to the data of the trade, reserves, and product of each year with no time lag.

International Trade, Lagged Reserves, and Lagged World Gross Product

To carry the statistical observations still one step further, another multiple correlation was applied to the above variables. This time, however, a time lag of one year was introduced, that is, international trade of each year for the period of analysis was correlated with international reserves of their previous year and world gross product of their previous years. The coefficient of multiple correlation was .97, and the coefficient of determination was .95. Comparing these results with the results of the previous subsection, one can notice that introduction of a one year time lag did not change the results of the correlation.

International Trade, International Reserves, World Gross Product, and Time

Again, to go one step further, another multiple correlation was applied in which in addition to the variables of the previous subsections, passage of time was added, not in the form of time lag but in the form of

correlation between international trade, reserves, world product and time all for the same years. The coefficient of correlation for this set of data was .97, and its square or coefficient of determination .96, indicating that variations in the variables: international reserves, world gross product, and passage of time altogether account for 96 per cent of the variations in international trade. Thus introduction of more variables slightly increased the coefficient of multiple correlation.

International Trade, Lagged International Reserves, Lagged World Gross Product, and Time

Finally, to check once again the effect of one year lag time upon the coefficient of correlation between the above variables, another multiple correlation was applied. This time, however, international trade of each year was correlated with the international reserves of the preceding year, world gross product of the preceding year, and passage of time. The coefficient of correlation for this set of data was .98 which compared to the coefficient of correlation of the preceding subsection shows still further improvement. The coefficient of determination for this set of variables was .96.

Obviously further variables can be introduced, and further multiple correlation analyses with expanded variables can be applied to them also. What has been undertaken so far, however, does show that the variations of international reserves, world gross product, and passage of time

together account for a large percentage (more than 96 per cent) of variance in international trade. The already obtained coefficient of multiple correlation in the last subsection was .98 which is only .02 off from one, the maximum value that the coefficient of correlation can ever take.

It must be noted in closing, and emphatically so, that there is no claim of perfect accuracy for these types of statistical analyses. They can, however, very well be accepted as approximations of the degree of relation between international trade and other variables such as international reserves, world gross product, and passage of time.

The above approximations show that variations in international trade can be explained not only by changes in international reserves, but also by changes in other variables such as world gross product and time. They also show that the highest coefficient of simple correlation exists between international trade and international reserves on the one hand and world gross product on the other. Thus the statistical study of the period under observation suggests that variations in world product and international reserves (and its adequacy or inadequacy) do affect changes of international trade, but less so than variations in world gross product.

If world gross product at constant prices as

presented in Table 25 above were taken as an approximation of the rise in world income, upon computing the ratio of each year's imports to it, one can observe that the world average propensity to import (average propensity to import being defined as the ratio of imports to income) seems to have increased since 1950 (Table 26).

TABLE 26

AN APPROXIMATION OF WORLD AVERAGE PROPENSITY TO IMPORT

(1) Year	(2) World Imports*	(3) World Gross Product	(4) % Ratio of (2) to (3)
1950	59331	697723	8.5
51	81390	744867	10.9
52	80186	773153	10.3
53	76563	810868	9.4
54	79596	820296	9.7
1955	88968	876870	10.1
56	98122	905157	10.8
57	107010	933491	11.4
58	100800	942870	10.6
59	106700	999442	10.6
1960	119400	1046585	11.4
61	124600	1084300	11.4
62	132400	1140872	11.6
63	143600	1197447	11.9
64	160800	1235159	13.0
1965	175000	1272874	13.7
66	191700	1310589	14.6

Source: Data in columns (2) and (3) are taken from Table 25 above; data in column (4) are based on personal computations.

*There is no indication in the International Financial Statistics that the world import data in column (2) are at constant prices. Column (3) data are, however, at constant prices. As a result, percentage ratios of column (4) may be overestimated.

CHAPTER VIII

TOWARD REFORM

It is the purpose of this chapter to bring together some of the elements of what has already been discussed in an attempt to help solve the problem of international liquidity. However, new discussions will be presented as this is not designed to be mere reiteration of past chapters.[1]

Success Criteria

An ideal proposal for the reform of the international monetary system should be universal and evolutionary in the sense of being capable of evolving into more advanced forms of international monetary management. It must also provide for rational and non-inflationary needs of international liquidity and thus promote world production and trade rather than discourage it. The ideal proposal must also maintain and reinforce the stability of the system by counteracting massive shifts from one reserve

---

[1]This chapter will contain more personal critiques and judgements.

to another and safeguarding the value of reserves.[1]

Acceptability

An analyst of the current international monetary system may be concerned with restoring the world to full employment and growth, with international liberalism or with trade discrimination, with or without restrictive practices such as exchange control, quotas, prohibitive tariffs, with or without relative fixed ratios of currency to gold, with or without the objective of avoiding liquidity crisis, and with or without balance of payments adjustment. Thus depending on what his personal bias may be, an analyst is likely to accept certain plans and reject others.

On the other hand, attention may be limited only to short term measures resulting in provision for ad hoc arrangements which may be tentative in nature and leave the international monetary system constantly guessing about what will be the next piece of "ad hocery"; such proposals are, therefore, inherently unstable. Many proposals have not addressed themselves to the long-term needs for international reserves. Probably more significance has been attached to the international liquidity than to the balance of payments adjustment problem. Thus a number of plans

---

[1]Zolotas, Alternative Systems for International Monetary Reform, op. cit., pp. 17-18.

have been advanced to provide for more liquidity which suggest that the problem of adjustment would either be automatically reduced or relatively eliminated through normal functioning of the revised system.

Controversy exists between proposals which would bring about radical change through eliminating totally the undesirable aspects of the present international monetary system and the time-tested advantages of the present situation, a study of which would lend weight to those arguing for amendment of the present system. This controversy ranges from the complete elimination of already existing international institutions, such as the IMF, to simple amendments in the charters of existing institutions which would make them more amenable to achieving the desirable objectives.

Dissension exists also over the question of providing more international liquidity for underdeveloped countries. Proposals may vary with respect to their political implications and considerations; some favor certain countries within the present international environment, or at least attempt to respect their established rights (i.e. the Lutz Plan which respects the U.S. role in the international economy); others are against established rights.

Mere addition to international liquidity may not be as important as the ability of the countries to

effectively (or efficiently) use the additions to liquidity. Thus the ability of underdeveloped countries to use their economic aid effectively is not to be confused with the need for addition to world liquidity. Moreover, differing degrees of value may be attached to the practicality of a proposal; some proposals are strictly limited to a theoretical framework of analysis; others go beyond that.

National interests is another factor that affects rejection or advocacy of a particular plan in certain circles. For a country with heavy involvement in international trade a flexible exchange rate may be intolerable to traders and even to central bankers. If the foreign sector of the economy accounts for a large part of total business, the introduction of a flexible exchange rate into the system may involve substantial additional risk, thus bringing uncertainty with respect to a large percentage of total transactions. Business likes predictable future conditions and relative stability; as a result, a flexible exchange rate may impose a real burden that the business sector may actively resist.

The degree to which a country relies on international trade for its economic welfare also affects the way it thinks about different proposals. Some would advocate the present status quo, holding that it is better for the monetary authorities of a nation to run its monetary affairs than administering them through a remote "House of

Lords" composed of central bankers over whom the electorate has no control.

Modern economics will hardly tolerate undesirable consequences of adjustment to a balance of payments deficit in regard to their employment and income. Too, facing the realities of life, one should not forget that it is not always the prices alone which adjust to restrictive policies, but also employment and income levels. Thus the social or political costs of a movement may seem so great to the authorities of a country that they could be blinded to the economic justifications. Central bankers also have differential propensities to inflate under different conditions. Thus the same banker who may allow a six per cent rate of inflation in one year may not tolerate more than three per cent inflation under different circumstances. So one may disagree even with himself, let alone others.

Several other factors can also help one to decide on general acceptability of a proposal. For example, prestige and pride may dictate that the United States has a currency that would not depreciate vis-á-vis the currencies of other countries. The nationality of the analyst, too, is a factor in that if he is from a "strong currency" nation, which normally is taken to mean a surplus country, he may use a "big voice"; his tone might be a reflection of the power of his country.

Finally, no one proposal should be looked upon as

a panacea for solving all the problems of the present international monetary system. The objective that has occupied most of the attention of the individual (or group) analyst(s) varies, hence in their "scale of preference" various aspects of the international monetary system have occupied different significance. For example, Hart, Kaldor and Tinbergen have tried to solve the problem of commodity price stability along with the international liquidity problem. Obviously, all objectives of an economic system (i.e. efficient allocation of resources, maximum and consistent growth, and full employment) do not always correspond. To the extent that they do not and so long as there is disagreement among financial authorities of different countries as to "objective" priorities differences of opinion will exist.

In this study the underlying structure of the present international monetary system--based on the established fixed price of gold, international cooperation, and relatively fixed exchange rates--can be accepted as a structure upon which to build future arrangements.

> To create acceptable--continuously acceptable--international money is a novel and, perhaps, very difficult task. The practical problem is not to arrive at a theoretically perfect solution--desirable as it may be to know what this would be--but rather to find workable schemes that governments might be willing to accept. The best bet is to bring about an evolutionary change in the state of mind of those who are responsible in each nation for managing its international affairs.[1]

---

[1]Kriz, op. cit., p. 25.

Smooth Growth of Liquidity and Factors Affecting Adequacy of Reserves

If it is agreed that more liquidity is needed, its injection into the system should be smooth. It must further take account of possible necessary increases as well as decreases under various circumstances. A reformed system must aim at adequacy of international reserves. Is it possible to lay down any criteria for determining adequacy? No simple positive or negative answer can be given to this question. The following paragraphs, however, will provide insights to this problem.

There are numerous elements which affect international liquidity. The exact manner and the degree of influence is not easily measured. Some of these have been already referred to at different occasions in this study, for example, growth of world trade and capital movements, the degree of dependence on international trade, efficiency of corrective adjustment policies, and amplitude and duration of imbalances in international payments. There are other factors which are influential. Among these are: national reserves, psychological attitudes toward minimum or desired level of reserves, namely, the level of reserves a country thinks it "should" or "ought to" hold, the reserve level that a country may expect to hold under different policies, the actual significance attached to reserves, the use of available international credit facilities, the ability to borrow, the conventional forms of

savings habits, and international banking habits of each country, country reserve policies, envisaged domestic and international policy aims, the use of appropriate exchange rates, stage of development of the countries, seasonal fluctuations of export proceeds, the adoption of fiscal and monetary objectives and conditions in the world as a whole.

The absence or presence of these conditions cannot be determined a priori. For example, reserves that may seem adequate at one time, may be regarded inadequate at another time. Below a minimum reserve balance, a country may want to undertake corrective measures, while above a maximum reserves may not be as important a policy issue. For instance, if the reserves of a country fall below ten per cent of its imports, or short-term liabilities, the country facing this position may become greatly concerned about increasing its reserves; if the same ratio reaches forty or fifty per cent, the country may not be greatly concerned with increasing the level of reserves. Again, above a certain percentage an increase in reserve-import ratio may encourage an expansionary policy, and below a certain minimum a contractionary one. Reserves which are regarded sufficient under one type of fiscal and monetary policy combination may be inadequate under different circumstances. Some countries may question the validity of inadequacy of reserves, yet they may go along with uneven

distribution of reserves. Thus, determination of the real adequacy or inadequacy of reserves, without considering many other factors which affect the question of adequacy, is difficult. In fact, in the light of so many qualifications it would seem unwise to lay down any simple rule in this subject. Nevertheless, the international monetary system must provide for rational and non-inflationary needs of international liquidity thus promoting world production and trade.

Flexibility

A proposal should be sufficiently flexible to allow an increase or a decrease in liquidity without undue delay, if such change is regarded to be necessary and/or desirable.

Technicalities

From the standpoint of technicalities the proposal should be specific in its compatibility with the existing system, its ability to channel the liquidity to the point of greatest legitimate needs in different circumstances, its ability to respond to global shortages as opposed to individual country needs, its effect on the trade and investment relations between countries, its merits in terms of bringing about a greater stability in the system, the machinery required for control of the countries, desirability of a world-wide approach versus a group approach, etc. Also, a proposal may well be theoretically

neat; yet, if it is not feasible within the existing framework of norms and institutions it may not work.

To conclude this section one may be reminded of Machlup's interesting assertion:

> It would be unreasonable to expect that anyone could devise an international monetary system serving all purposes optimally. Since people's aims are different, and to some extent incompatible with one another, no system can be "objectively" called the best. Only if we could agree on preference scales for mutual trade-offs among different objectives would it be possible for us to judge one of the plans superior to all the rest. There is, of course, no chance for such agreement ever to be obtained.[1]

Guidelines Toward Constructive Action

When it comes to proposing the creation of more international reserves or the provision of more international liquidity, the premises on which the proposer bases his judgements must be analyzed. Accordingly, the following subsections are part of the personal judgement of the undertaker of this study, and in some cases coincide with the assertions of the authorities in the field.

Importance of Liquidity

All economic knowledge of all countries shall be used in full awareness of the interrelated national and international responsibilities and must be used to the

---

[1]Machlup, "International Monetary Systems and the Free Market Economy," op. cit., p. 1.

advantage of the world economy as a whole rather than to the benefit of specific countries. If no action is taken to reform the international monetary system, there is no doubt that currencies of individual countries would continue to have periods of strength or weakness, as has been experienced in the case of Deutsche mark, lira, guilder, pound, and dollar; many countries would occasionally face periods of difficulties. In fact, even with the reform of the international monetary system, it is likely that the currency of some countries would still face periods of strength and weakness.

Just as in a domestic economy whose production is affected by a large set of factors including physical and human conditions under which production of the country proceeds, in the international economy the success or failure of every country is influenced not only by the country's own policies (monetary, credit and fiscal, commercial, wage, investment, growth, employment and counter-cyclical policies) but by the repercussions of the policies of other countries as well. Accordingly, one cannot neatly select one factor and attribute the success or failure of the international economy to that particular factor. Yet, by and large, some of the factors play a more significant role than the others. The amount of money in circulation is one such factor, as it is believed that lack of adequate money would result at least in a

cut in business and may retard growth and employment.

It was pointed out that in the international economy, too, an adequate supply of international money (anything which can be accepted as an international medium of payment, measure of value, medium of savings and deferred international transaction) is a crucial factor. Unfortunately, all indications, theoretical as well as statistical, suggest that the international economy, with the exception of a few countries, has not enjoyed adequate long term international liquidity if the growth of liquidity be compared with that of international trade and/or world production.

It was also mentioned that there seems to be a growing agreement that an expanding volume of international trade calls for a growing value of international liquidity facilities in the long run, but this does not necessarily have to be in arithmetic proportion. Since at the present time gold is supplemented by the reserve currencies and the expansion of both gold and currencies are subject to limitations, the long run growth of world production and trade may be inhibited. The evolution of the international monetary system will go on, and if there is to be no inappropriate brake upon the possible expansion of world production and trade, the world must be, and in fact is becoming, prepared to supplement the present international system.

The developing countries, hampered by their structural problems and occasionally subject to fluctuations in their export earnings, have found it difficult to achieve simultaneously their goals of economic development, rapid growth, internal and external stability. Internal imbalances have prevented the expansion of their economies; exchange rates have been changed usually in the direction of depreciation; restrictions on imports have often been restored and are likely to remain there for the foreseeable future.

Advanced countries have enjoyed a greater degree of success as they have pursued policies of full employment. Not only has their production increased at an annual rate of four to five per cent on the average, but also their productivity has grown and large amounts of structural unemployment (which at one time did exist in many European countries) have been eliminated. With respect to price stability, it must be noted that inflationary pressures continued to be felt, and the cost of living in these countries has increased over the last two decades.[1] This is a general and broad picture of the functioning of the international economy over the last twenty years.

---

[1] 1965 Annual Report, op. cit., pp. 11-12.

At the same time, most of the countries of the world did not, and still do not, want to sacrifice domestic economic objectives such as a high rate of growth and full employment for the sake of periodic or consistent balance of payments problems. If this be the case, there is no doubt that if the system were left to itself without any shoring up, it would be liable to failure and collapse. In short, the system has shown remarkable adjustability in the past, but the future is not so certain.

In this environment means of temporary financing and short run solutions for the prevention of monetary crisis have already been developed (i.e., General Arrangements to Borrow, increase in the IMF quotas, stand-by credits, currency swap transactions, sale of Roosa bonds to foreign countries by the U.S., London gold pool). Most of these, however, are short term solutions which are of a pallative nature and have done no more than mount a temporary attack on the problem.

A Continuing Place for U.S. Dollars

Stability of Dollar in Terms of Its 1934 Gold Content

As quoted previously from Robert Roosa, on a percentage scale in relation to the 1934 gold price, it is only the dollar that remains at a 100, while the monetary units of other countries have depreciated--and sometimes greatly--over the last three decades. The French franc works out at three per cent of its 1934 value; the German

mark at four per cent; the Belgian franc at nine per cent; the Dutch guilder and the Swiss franc, however, have held close to forty per cent and seventy per cent respectively.[1] Thus one is left with no doubt in mind that even in view of the historical evidence, the dollar has remained remarkably stable relative to its 1934 gold content, while France has shown the least success in this direction.

If there is no indication that the Swiss or the German monetary authorities are anxious to see their money more widely used outside their borders and thus outside of their control (as they tend to think),[2] then the dollar will not only have to remain as a key currency for the free world, but the need for international reserves, over and above newly mined gold, will have to come either from the U.S., or from the IMF, or from some such institution to be created.

> It must be assumed that payments deficit of the United States will not contribute to the formation of reserves in future on the same scale as in recent years. It therefore seems safe to forecast that in the future greater reliance than over the past decade will have to be placed on the provision of international liquidity, as needed, by other means. The Fund could make an essential contribution in this connection.[3]

Since 1958 dollars have been accepted reluctantly, at least in some instances. If restoring confidence in

---

[1] Roosa, op. cit., p. 84.

[2] 1965 Annual Report, op. cit., p. 14.

[3] 1964 Annual Report, op. cit., p. 31.

the key currencies through reversing the deficit of the key currency countries is considered an advisable move, the undesirable effects of this solution in bringing about severe international deflation, more urgent needs for international liquidity, and possibly even more elements of vulnerability in the system should not be forgotten. Thus expansion and contraction of the U.S. deficit may both have undesirable effects in the sense of confidence in and acceptability of dollars.

Dollar Purchasing Power Compared with the Purchasing Power of Other Currencies

The following Table shows that the cost of living has gone up less in the U.S. than in any other major industrialized country in 1966 as compared with 1960, on a 1958 basis (the year in which U.S. deficit began).

Overall Financial Soundness of the U.S. Position

A continued place for U.S. dollars in reform of the international monetary system can also be supported in view of the overall financial soundness of U.S. position. Salant, Kindleberger, and Despres have argued in the Economist[1] that the U.S. is borrowing short and lending long, and has become the world's financial intermediary. Gunther Ruff adds to the above argument that a glance at the U.S. balance of international indebtedness shows that "this country's over-all financial position vis-á-vis the

---

[1]February 5, 1966, pp. 525-529.

TABLE 27

COMPARISON OF CHANGES IN THE COST OF LIVING BETWEEN THE U.S. AND OTHER MEMBERS OF THE GROUP OF ELEVEN (Index Numbers: 1958 = 100)

Country	1960	1961	1962	1963	1964	1965	1966
United States	103	104	105	107	108	110	114
United Kingdom	102	106	109	111	116	112	127
Germany	103	106	109	113	115	120	123
France	110	114	120	127	129	133	137
Italy	103	106	113	120	128	132	135
Japan	104	113	118	126	132	140	148
Canada	103	103	105	106	108	112	116
Netherlands	103	106	106	111	117	124	128
Belgium	101	103	104	108	112	117	121
Sweden	105	103	113	117	121	128	136
Switzerland	101	105	108	113	115	121	126

Source: International Monetary Fund, International Financial Statistics, Vol. 20, No. 8 (Washington, D. C., August 1967), p. 33.

rest of the world, far from weakening, has been growing stronger year by year." Ruff further adds that "through all the years since the so-called dollar crisis was proclaimed, the dollar's purchasing power has remained relatively more stable than that of any other currency."[1] The

[1]Gunter Ruff, "A Dollar-Reserve System as a Transitional Solution" in Princeton University--International Finance Section, Essays in International Finance No. 57

previous Table showed the validity of Ruff's assertion. He goes on to cite the holdings of a number of countries such as Canada, Japan, and Sweden to a large dollar reserves as a sign of their being "more impressed by facts and figures than by the hue and cry raised in some Continental places."[1] In view of such assertions one may safely hold that the dollar is in no immediate danger, and can still be used as a component of international reserves, even after the reform of the system.

Possible Effects of a Dollar Devaluation

Should the U.S. dollar be devalued while other alternatives are open which do not necessarily imply a decline in the role and/or prestige of dollar internationally? The purpose of the following paragraphs in this subsection is to show the inappropriateness of such a measure.

Suppose that the U.S. wants to devalue its dollar. How much would this country benefit or lose? To what extent would the foreign official and private dollar holders be affected? What would be the terms of devaluation? The following calculations are meant to show how uncertain the results of such a measure would be.

Assume that the U.S. decides to devalue the dollar

(Princeton, N. J.: Princeton University Press, January 1967), p. 7.

[1] Ibid.

by twenty per cent. At the present price of $35 = 1 ounce of gold, this would mean a $7 increase. A twenty per cent devaluation would thus mean that the price of dollars in terms of gold would rise to $42 per ounce. The same twenty per cent dollar devaluation in terms of gold would, of course, mean a twenty per cent rise in the price of gold in terms of dollar.

Based on these simple calculations and using 1966 as the base year, further computations can be made to check the possible effects of a twenty per cent dollar devaluation on the U.S. U.S. gold holdings in December 1966 were reported to be 13,235 million dollars.[1] If this is regarded as one hundred per cent, twenty per cent rise in its price would mean a gold profit of $2647 for the U.S. which is the addition to the dollar value of U.S. gold holdings under a twenty per cent devaluation.

But would the U.S. benefit from this? Obviously other countries are involved which the U.S. may or may not want to consider; apart from a weakening of confidence in the U.S. dollar, foreigners holding official and private dollar balances would be disturbed because their dollars would have lost part of their value. U.S. short term liabilities to foreigners in December 1966 were equal to $27596.1 million.[2] From this amount $588.1 million

---

[1] International Financial Statistics, August, 1967, op. cit., p. 15.

[2] United States Treasury Department, Treasury Bulletin (Washington, D. C., September 1967), p. 91.

were payable in foreign currencies. If this amount were to be deducted from the total U.S. short term liabilities, there will remain $27008 million. This is the total of U.S. short term liabilities to foreigners (official, private, international, and regional) payable in dollars, including official dollar balances held by foreigners. Table 28 shows the components of U.S. short term liabilities.

TABLE 28

U.S. SHORT TERM LIABILITIES TO FOREIGNERS PAYABLE IN DOLLARS
(in millions of dollars as of December 1966)

To official institutions	$12023.7 million
To foreign banks	9860.5 million
To other foreigners	3743.3 million
To international and regional agencies	1380.6 million
Total	$27008.1 million

Source: U.S. Treasury Department, Treasury Bulletin, (Washington, D. C., September 1967), p. 91.

Now the losses which would be suffered by official holders of dollars and other short term U.S. liabilities in case of a dollar devaluation of twenty per cent, is $2404.74 million. This is twenty per cent of $12023.7 million (official short term liabilities of the U.S.). If the U.S. decides to compensate the losses suffered by foreign official holders of U.S. liabilities, its gold

profit as a result of a possible twenty per cent devaluation is large enough to cover this compensation; inasmuch as the $2674 million U.S. gold profit as computed above is larger than $2404.74 million. In fact, if only U.S. official liabilities were to be guaranteed against devaluation, the U.S. would be left with $269.26 million ($2674 - 2404.74 = $269.26 million), or approximately one-fourth of one billion dollars profit. But would this country really have this much profit? This depends on what the reaction of the private dollar holders is. Obviously, if the danger of devaluation were imminent, private holders of dollars and U.S. short term liabilities may sell their holdings to their central banks. If so, private or non-official holdings could quickly and easily become official holdings. Thus the U.S.' possible profit depends on whether private holders of dollars are offered a compensation or guarantee for the loss of their value due to devaluation.

If all U.S. short term liabilities were to be guaranteed and compensated for the full loss of their value, then the U.S. would have to pay $5401.6 million. This is twenty per cent of $27008 million (total U.S. short term liabilities payable in dollars). Now comparing this total of possible compensation to the U.S. gold profit, that is, comparing $5401.6 and $2647 million respectively, the U.S. will be left with $2754.6 million

net loss ($5401.6 - $2647 = $2754.6). The question now is: Is this a small price for the U.S. to pay for some gain in international liquidity--a decline for the U.S.? The answer depends on the personal judgements of the individuals. Some may wish to see such losses spread over many years, and may therefore conclude that it is a small price.[1] Others may not tolerate the loss for the American economy for a little ease in international liquidity due to a rise in the price of gold. All of these possibilities, of course, are based on a shaky assumption that U.S. devaluation will not seriously disturb the international confidence and will not bring about international monetary chaos. But a devaluation of twenty per cent on the part of U.S. dollar could create retaliatory actions on the part of other countries, and make the system more vulnerable by shaking international confidence. Even if other countries were assured that they would be reimbursed for losses due to U.S. devaluation, the very fact of such guarantee may entail losses for the U.S., which cannot be so easily tolerated. Due to all such disadvantages and for other reasons discussed in Chapter III above, it is hard to accept an increase in the price of gold, or a dollar devaluation, as a solution to the problem of international liquidity. In the above paragraphs, attention has been limited to the U.S.;

---

[1]Hansen, op. cit., p. 74.

this was done for the sake of brevity, but the real effect of a dollar devaluation upon the international monetary system and countries other than the U.S. remains subject to uncertainty and approximations.

A Continuing Place for Gold

Pros and Cons in Regard to a Close Link Between Gold and New Reserves

There is less disagreement on the place of gold in the system than there is on its role in relation to the introduction of new reserves.[1] To illustrate this disagreement it will be worthwhile to look into the arguments against a close link to gold in the creation, distribution, and use of new reserves. Then in the light of validity of such arguments, which must necessarily remain value judgements, arguments in favor of a close link to gold will be presented.

The opponents of a close link to gold in the creation, distribution, and use of new reserve assets assert that

1) This link would represent a step backward in that it reverses the historical tendency to relax the use of gold in monetary management and to rely more on the use of monetary instruments other than gold. Some advocates of this argument refer to the evolution of the monetary system

---

[1]For the following section, reliance is made on the 1965 Report of the Study Group, op. cit., pp. 54-64.

in the U.S. and argue that since it has proved possible to rely less and less on domestic monetary management, gold could assume a lesser role in the international economy as well. Resort to historical evaluation as above has, undoubtedly, some validity. On the other hand, however, confidence in monetary system is also important.

2) Distribution of newly created reserve assets in proportion to gold holdings of countries is inequitable. While this point too has some validity, it must be noted that the distribution of new reserve assets does not necessarily have to be made on the basis of the countries' gold holdings; other factors such as country quotas and share in international trade may be used. This objection is not really against a close link to gold, but against the manner of distribution of new reserves on the basis of gold holdings.

3) It is also argued that monetary authorities would feel an incentive to maximize their gold holdings by converting their assets into gold. A close link to gold would encourage countries to hold a higher ratio of gold to total reserves resulting in sizable gold movements in international settlements which could be damaging to confidence. There is no convincing argument that countries would necessarily maximize their gold holdings or that they would initiate sizable gold movements. These assumptions are based on theoretical formulations of economic behavior and remain in the realm of subjective judgements.

Against the above arguments, and in support of a link with gold it is asserted that:

1) Gold is still a basic reserve asset acceptable by many countries, even preferable by some. Thus if there were any new reserve assets with a close link to gold, not only would there be a higher likelihood of their acceptance by various countries, but also safeguarding creditor countries against excessive accumulation of new reserve assets would be simplified.

2) Furthermore, a close link to gold would make it clear that a rise in the price of gold is excluded as a possibility of the reform which may put an end to, or reduce, the existing uncertainties about gold; these uncertainties are factors in gold hoarding.

3) Moreover, to supplement gold which is limited both in terms of stocks and production would contribute to the solution of an inadequate gold supply without disturbing an already existing basic element of the system.

4) Finally, it is said that the shift from other forms of reserve assets into gold, which might theoretically be induced by a close link of new reserve assets to gold, could only be on a limited scale due to a lack of strong inducements for the Group of Eleven (which already holds a sizable amount over seventy per cent in 1966 as stated in a previous Table of total noncommunist gold holdings) to procure additional gold. Only countries outside the

Group of Eleven would have such an inducement and even this would be on a limited scale.

While all these arguments in support of or in opposition to a close link between the new reserve assets and gold still remain within the realm of subjective judgements, it appears pertinent to note that except that the extension of a gold link might move the system backwards, the pro-gold arguments seem more convincing.

A Return to Classical Gold Standard?

What about a return to the pure gold standard and all its rules? Whether or not this can be a solution of the problem of international liquidity remains a value judgement. It would seem that such a return is a step backward and could lead to a contraction in world trade, increasing unemployment, and sharp swings in economic activities. A strict gold standard would mean also that all countries must be willing to buy and sell gold at a fixed price. Needless to say the U.S. is now the only nation doing so. Thus it is difficult to accept a return to gold standard. Further reasoning is best explained by Reginald Maudling.

> Either it [a return to the classical gold standard] means that the values of world trade must be tied to the amount of gold that can be mined and acquired by monetary authorities, which seems to me a proposition that is not intellectually sustainable; or the volume of gold available must be brought in line with world reserve requirements by variations in the price of gold, and the difficulties of this course are only too clear to all of us. To quote the Managing Director's Jayne Lectures for 1961, "it is certain that

gold output alone cannot be relied upon to bring about the necessary increase in the world's money supply."[1]

A Continuing Place for the IMF

The next question concerns the role of the IMF and whether it should be given a vital role in the creation of reserve assets. Opponents of this view assert that:

1) If the IMF were given the power to create and distribute reserves on its own initiative, this would shake and impair its role as a custodian of monetary discipline which is based, so the argument runs, on the conditional grants of credit. This argument does not seem plausible, because the role of the IMF as a custodian of monetary discipline does not necessarily require that there must be inadequate international liquidity. Furthermore, supervision by the IMF cannot ensure international monetary order if the countries of the world do not want to adhere to monetary disciplines.

2) It is also asserted that the present procedure of weighted voting in the IMF gives too much influence to a few countries. There is an element of truth in this, but this concerns the rules of voting rather than the potential participation of the IMF in reserve creation per se.

---

[1]Maudling in International Monetary Fund, Summary Proceedings, Annual Meeting (Washington, D. C., 1962), p. 66.

3) To the above disadvantages it is added that there will be difficulty in drawing a line between those IMF members who would benefit from reserve asset creation and those who would not. While this is true, certain lines of recognition have been accepted, arbitrary though they are (e.g. $500 per capita annual income distinguishes developed from underdeveloped countries[1]). There is no reason why one should be over-concerned with this case.

4) It is also said that countries have, in the past, shown reluctance to draw on the IMF. Past reluctance need not necessarily continue; in fact, such countries will probably have to draw more heavily on the IMF. Some fear that countries applying for such aid might be forced to repay before its reserves improve. Repayment, however, might be extended over a period of several years to remove undue pressures on policy. It would seem that a country could adjust its fiscal, monetary and other policies toward adjustment without inappropriate pressure over a period of several years.

5) Finally, some economists fear that the necessary amendments of the Articles of Agreement may open the door to further unpredictable and perhaps undesirable modifications in the Agreement. Fears like these are not well-founded; countries can, by means of weighted votes,

---

[1]Benjamin Higgins, Economic Development (New York: W. W. Norton and Company, Inc., 1959), p. 6.

prevent undesirable modifications.

The above paragraphs show that arguments against the participation of the IMF in the creation of new reserve assets are not well-founded.[1] Apart from these, however, there are strong reasons which would lead one to believe that IMF participation (or at least supervision) is useful.

First, reform of the international monetary system is a matter of concern not only to developed but also to the underdeveloped countries. If this were true, an international institution such as the IMF with a diversified membership should be entitled to have some influence over matters of international financial concern.

Second, the IMF's experience and prestige make it a natural center for the creation of new reserve assets.

Third, if maintenance of a proper balance between the creation of additional reserves and the extension of credit facilities were desirable, it would seem to be more appropriate to combine these functions in one institution. In fact, it would be unfortunate, and perhaps also confusing, to establish a rival center of decision in the field of international monetary management.

Fourth, the Fund has shown its willingness to treat the gold tranche as an automatic reserve asset which

---

[1] In this section, reliance is made on the 1965 Report of the Study Group, op. cit., pp. 54-64.

countries can use without reluctance. The same thing may happen to the newly created reserves.

Finally, the weighted voting system has generally reflected the relative economic weight and share of the countries in international trade, and as such it is an equitable procedure. It can be made to reflect changes in relative positions through reconsideration of all countries' positions through periodic (once every four or five years) changes to be agreed upon in the form of a convention arrived at in the beginning.

New Reserve Creation

If a rise in the price of gold and a flexible exchange rate each face dubious support from the practicing monetary authorities, and if the requirements for fairly free international trade and investment are to be met, one is forced to consider the third broad alternative of the creation of international reserves.

New arrangements, of whatever form, must not necessarily interfere with the international prestige of the dollar. New arrangements must not be imposed on individual sovereign nations; they should be left, rather, to their free choice and must not disrupt or seriously alter the native right of control over the domestic currency of any country. New arrangements should not be inconsistent with the present role that the IMF plays in international monetary affairs; in fact, the likelihood of success

appears to be larger if reliance were to be placed on the IMF. The possibility that such reliance may necessitate amendments in the charter of the IMF, should not be regarded as a major obstacle.

Confidence is a crucial and vital factor in the survival of a monetary system; radical changes adversely affect this factor and for this reason must not always be attempted. The probability of success of new arrangements would be higher if the new arrangements were to contribute to rather than negate or reduce the maintenance of the relatively fixed parities of exchange rates now available.

The probability of success of any new arrangement may also be raised if provision is made for fitting them into familiar patterns of experience. This, however, should not preclude the acceptance of new institutional arrangements. At the time the IMF was established, the circumstances were too critical to allow a real appreciation of the role that it could play in international monetary affairs. Today, however, the role that the IMF plays is better understood. The same analogy may hold true with respect to the introduction of totally new arrangements. Nevertheless, as noted above, radical changes may reduce the probability of success because of their effect on the confidence element.

If new arrangements, or amendments in already

existing ones, take the form of creating additional reserves, a probability of success would exist if they were to be made operationally interchangeable among central bankers and other monetary authorities of different countries and with any or all domestic currencies.

New arrangements must be handled in such a manner that they will include the capacity to: (a) enlarge or reduce international liquidity, depending on the circumstances of the time as decided upon by international supervisory monetary authorities, and not inject so much liquidity into the system as to create inflationary tendencies in different countries' expansion, and (b) not inspire reckless monetary managements and neglect of monetary disciplines. New arrangements must provide the system with long-term criteria for adding to the international liquidity through automatic arrangements, if possible, rather than giving authority to act only in response to short-term needs. Any such criteria must take into account the long-term or secular needs of the international economy in terms of economic growth, employment, and stability.

Operational Authority for Managers of the Newly Created Reserves

As James Meade has suggested, "all federal or confederal arrangements rest upon a sensible division of functions between the central and the local governments,

suitable to the practical problems of the real situation."[1] If the countries of the world reach an agreement on the lack of adequate liquidity in the present international system, then they would have to accept a "sensible division of function" under a new or amended set of arrangements. It becomes all the more important for the United States, as well as for the U.K., to conduct their financial and economic policies with the highest sense of responsibility.

Certain Statistical and Non-Statistical Findings

The statistical analysis of the previous chapter showed that production of world gold was a variable showing a high coefficient of correlation with the passage of time (measured in years). Then the future trend of world gold production was predicted which, due to the high positive degree of correlation, can be a dependable projection. Comparing the rate of growth of gold with the growing needs of international trade in an expanding world economy, the conclusion was drawn that the gold foundation around which the present international monetary system is centered cannot increase as fast as is needed to finance the long run growth of international trade.

Again, statistical analysis made on the basis of the estimates of world production and international trade

---

[1]Meade, Readings in International Economic Relations, op. cit., p. 268.

showed that the average propensity to import in the international economy seems to have increased, resulting in more international interdependence. Given the growing needs of the international economy and perhaps the growing international interdependence between countries, there is no doubt that the probability of collapse of the system or periods of weakness of individual key currencies become increasingly greater if it were to be left to itself without provisions for long term international liquidity.

The statistical analysis of the previous chapter also revealed that variations in international trade are correlated with changes in international reserves, yet the highest degree of correlation for the period 1950-1966 existed between international trade and world gross product. Thus variations in international reserves did explain part of the changes in international trade, but less so than variations in the world gross product.

It was seen in Chapter VII above that variations in world gross product could explain ninety-four per cent of the changes in international trade; the coefficient of correlation for the period under observation (1950-1966) was .97 and its square or coefficient of determination was .94. It was also shown that introduction of a one year lag into the data of international trade did not change the results of the correlation significantly. It was also shown that the coefficient of correlation between

international trade and international reserves was .94 giving a coefficient of determination of .89. And even when a one year time lag was introduced to the data, the results of the correlation were not significantly affected. Comparing these coefficients of determination one may say that variations in international reserves could explain less of the variations in international trade (only 89 per cent) than could variations in world gross product.

If, on theoretical grounds, changes in the world gross product be taken as a cause of variations in international trade--note that in a statistical sense correlation does not mean causation--then the high positive coefficient of correlation between the two variables could mean that when world gross product increased, international trade increased also, and vice versa.[1]

---

[1]It is interesting to note that based on the data presented in Table 25 above, another statistical analysis was applied and a coefficient of correlation was computed for international reserves as a function of world gross product. This was .97, again a high positive correlation. The square of this, or the coefficient of determination, is .95, indicating that variations in world product accounts for ninety-five per cent of the variance in international reserves. A one year time lag was then introduced to the world gross product figures; that is, the data pertinent to international reserves of each year were correlated with the world gross product figures of their preceding years. The coefficient of correlation for these two variables was, again, .97, and its square .95. Thus introduction of a one year time lag did not change the results of the correlation.

Comparing these findings with the findings of subsections pertinent to the correlation between trade and world gross product, the high positive coefficients of correlation would lead one to believe that world gross product accounts for ninety-four per cent of the variance

Statistical analysis of the behavior of twenty selected countries also revealed that there was no one behavior among countries with respect to how much reserves they held for their imports and emergencies. Some countries such as the U.S. and Switzerland appeared to be holding high reserve-import percentages, while others such as Japan and Germany had, at times, had very low percentages. The countries with a high average propensity to import have had relatively low percentage ratio of reserves to their imports, which may mean they have been faced with difficulties in financing their imports. The statistical analysis further revealed that on the whole the twenty selected countries showed an average reserve-import ratio of less than fifty per cent, which is, in any case, less than half of their import needs. An attempt was made to represent the eleven industrialized countries in the sample, due to their relative effect on the gold and foreign exchange holdings compared to the world total holdings. It was also hoped that the sample size was large enough to cover certain developing countries whose role in international trade appeared to be important. Yet, it must be frankly confessed that other samples of countries must be statistically reviewed and

---

in international trade, and ninety-five per cent of the variance in international reserves. Thus in both cases, it is the world gross product which explains a good percentage of the variations in international trade and international reserves.

the results must be compared; in this study such attempts were not undertaken. This study had the objective of initiating some quantitative measurements which are so badly lacking in a good many international economic discussions. If there is reason to believe that the reserve behavior of countries will show widely different trends as the IMF believes[1] there is no doubt that individual countries, despite the reform of the system, may still have far less liquidity than they need.

The study also undertook a review of major proposals made in the 1960's for the reform of the international monetary system. Such a review revealed further interesting results. For example, one could see that many a plan suggested in the 1960's had realized that opposition to the fixed price of gold is unacceptable to businessmen, central bankers, traders, and practical men. On the other hand, one could also sense a growing understanding among economists and policy makers that a flexible exchange rate, despite its theoretical acceptability, is not regarded to be a desirable solution, as it will introduce elements of risks into the system, thus worsening instead of improving the system.

The study also showed that there are many economists (such as Lutz) who can clearly see the different aspects of various reform proposals as well as their

---

[1] 1964 Annual Report, op. cit., p. 35.

different possible consequences. As a result, there is today a sensible attempt to choose from different alternatives. There is a further attempt to be selective about an alternative, which if not the best, will more likely give better results. As a consequence of such mental evolution, it seems that the focus of the economists' as well as the practitioners' attention has been directed more and more toward further international cooperation and understanding in the form of reserve creation.

Thus considering the fact that many central bankers are not willing to accept radical changes, it would appear that creation of additional reserves within the basic framework of present institutions (with possible amendments to their charters) emerges as the best chance for reform. If this prediction can be relied upon, the analysis of different aspects of reserve creation as well as their procedural arrangements should more seriously be undertaken by the technical staff of the IMF, or some such institution.

Recalling the review of various plans suggested in the 1960's, one can almost safely conclude that there is less and less attention being given to the problem of balance of payments adjustment than to international liquidity. These two aspects of the international monetary system are, of course, interrelated. In view of such an interrelation, it is not hard to see that some economists

hope that the problem of balance of payment adjustments would automatically be eliminated or reduced as adequate liquidity is provided for the system.

The review of various plans and proposals also revealed that no one plan can be singled out from the various proposals and proclaimed to be the best or the worst. In fact, an attempt must be made to restrain oneself from making blunt value judgements. An intelligent choice, according to Machlup,

> would have to depend on many conditions and one cannot ascertain whether and to what extent they are fulfilled. What under certain circumstances would appear as the best solution may under other circumstances be hopelessly wrong. In economic policy decisions much depend on how they fit in with other measures adopted and objectives accepted.[1]

The decade of the 1960's happily shows an improvement over the preceding decade in that there seems to be a growing agreement that the supply of liquidity in the future international economy is going to be less than adequate if present trends continue. There are some who go beyond this assertion and hold that international liquidity has been less than adequate in the past, is still inadequate, and will become increasingly more so in the future. (Triffin is one example.) The statistical test run on the basis of the records of the past would seem to support that for the whole world, and on the average, international reserves which form a part of

---

[1]Machlup, "Plans for Reform . . .," op. cit., p. 89.

international liquidity have been less than adequate if they were to be compared with the needs of international trade.

In spite of the fact that concern for international liquidity is receiving more attention and added urgency in the 1960's, the world's monetary authorities still remain in substantial disagreement. The Ossola Committee (of the Group of Ten) is an example in this case. Despite the fact that the Study Group reached unanimous agreement that reserves needed to be increased --an achievement not to be underrated--there was total disagreement as to what the desired increase should be and how it should be effected. Fortunately, however, official sources (such as the IMF) as well as academic economists (e.g., Fritz Machlup) are on their way to arriving at points of agreement.

It appears that the general type of monetary reform which will emerge from discussions of the international monetary system would be basically along the lines of creation of additional reserves under the supervision of the IMF and within the framework of a fixed price of gold and a relatively fixed par value of currencies in terms of gold. The position taken by the U.S., the U.K., France, and more generally the readiness of the Group of Eleven to cooperate will have much to do with the outcome. These positions are, as yet, not perfectly known.

Furthermore, it is undemocratic to exclude the underdeveloped countries and developed countries outside the Group of Eleven from effective participation in the reform scheme; yet, from a practical point of view the influence of the Group of Eleven in terms of the size of their holdings of gold and foreign exchange as well as drawing rights with the IMF is strong enough to make their decisions effective, as the statistical review of the proportion of their international reserve holdings showed that their share has been more than seventy-two per cent since 1958, while other countries' shares are comparatively negligible (less than thirty per cent since 1958).

Certain Related Notes

Should the reform take the form of adding to international reserves, the adjustment in balance of payments would still take the form of domestic adjustments in relative incomes and prices. Moreover, periodic reliance on controls, direct or voluntary, would continue to exist over international receipts and payments even if to a lesser degree.

As has already been indicated, the existing international monetary system based on narrowly fixed exchange rates does require more liquidity. Yet, in a broad sense, more efficient balance of payments adjustment may be looked upon as a substitute for international liquidity creation in that the less international liquidity which

will be needed--by the world and each country--the more efficient will be the adjustment mechanism of balance of payments. This is to point out that the growing needs of the expanding world economy are not the only factors to be taken into consideration; mechanism of adjustment in balance of payments also affects international liquidity.

It should be realized that the current world opinion is not eager to grant the authority of reserve creation to a supernational authority. Many countries have a tendency to attach priority to the reserves over which they have their own controls; thus in view of present prejudices of many influential central bankers, the amount, method, and procedures of international credit creation would still be controlled for a while by the influential nations through negotiation, rather than through supernational authority.

Few people can doubt that domestic money evolved from full-bodied, through representative and "managed," to "book entry" or "deposit" money. The gold exchange standard, as it exists today, represents the counterpart of representative money in the international economy. Part of the disagreement on international monetary issues has its real roots in whether the world should move to a "managed" and finally to a "book-entry" money or not, and whether or not the world can--and should--jump over the managed stage and establish the "book-entry" or deposit money stage.

If the members of the European Common Market with their amazing efforts toward integration are still not even close to accepting a common monetary policy, a common central bank for the world and an international currency face less chance of success than reserve creation at least for the foreseeable future, since a world central bank may necessitate national governments to abdicate at least part of their monetary sovereignty--a step for which most of the countries of the world at the present time are still not ready. As yet central bankers do not seem prepared to consider their drawing rights and lines of credit a satisfactory substitute for their owned reserves, let alone try for the acceptance of a "bancor," or a super central bank which will be acceptable to over a hundred sovereign nations. Eventually, however, further international reserves created under the surveillance of the IMF may prove as acceptable as an international money. If this stage is ever reached, then the world would not be far from the creation of a world central bank.

Chances for the Creation of New Reserves

At this point it is appropriate to analyze the new "Outline Plan"[1] developed by the United States

---

[1]See Statement of the Honorable Henry H. Fowler, Secretary of Treasury. Before the Subcommittee on International Exchange and Payments of the Joint Economic Committee [of the U.S. Congress] September 14, 1967, 10:00 A.M. EDT. The statement is mimeographed by the Treasury Department, and carries no more reference to the facts of its publication.

government as a result of Secretary of the Treasury, Henry Fowler's negotiations with the Group of Ten Governors.

The "Outline Plan" points out that international liquidity needs cannot be adequately met by existing sources of reserves such as gold, dollars, and pounds sterling.[1] It is also asserted that Special Drawing Rights (SDR) in the IMF is a way to create supplements to existing international reserves. The objective of SDRs is "to provide a means by which global reserves can be expanded on a permanent basis by international decisions."[2] The agreement reached between the Group of Ten Governors and Central Bankers, in Secretary Fowler's opinion, avoided impairing the role of the dollar in the future.[3] The SDRs are also consistent with the role presently played by gold as an international reserve.[4] A period of time such as one year was regarded too short for reaching international decisions on a difficult matter such as international liquidity; accordingly, decisions on the amounts of SDRs to be established will cover five-year periods with interval allocations that can be made annually.

---

[1] Ibid., p. 18.

[2] Ibid., p. 22.

[3] Ibid., pp. 26-27.

[4] Ibid., p. 27.

The principle of participation of all IMF members was fully agreed upon. Distribution of SDRs between IMF members according to their quotas was also fully agreed upon. The SDRs have no direct relation with foreign aid devices; yet underdeveloped countries may benefit from them in the form of additions to their reserves and insofar as adequate growth of reserves reduces their tendency to impose restrictions on capital flows.[1]

Furthermore, the Outline Plan covering the SDRs did not attempt to tackle the balance of payments adjustment. The contribution of the U.S. attempts made the 1965 J.E.C. envisaged Guidelines a collective international judgement of 1967; in the process of negotiations individual views were hammered into the shape of an agreed plan for the creation of a supplement to the existing reserve assets. The agreement reached among the Governors of the Group of Ten made it clear that industrial countries have shown, according to Secretary Fowler, "their clear and sincere intent to build strongly and securely on the base of our current international monetary system."[2] Finally, Fowler informed his audience of the unquestionable committment of the U.S. to convert gold into dollars at $35 an ounce.[3] The Outline Plan had been made public

---

[1] Ibid., p. 28.

[2] Ibid., p. 36.

[3] Ibid., p. 37.

by the IMF prior to its consideration at the Annual Meeting of the Board of Governors of the Fund held in Rio de Janeiro during the last week of September, 1967.

The Outline Plan's major characteristics, as outlined above, are shared by this study, and if implemented, could provide a dynamic element of growth in the world's reserves for the future.

CHAPTER IX

SUMMARY AND CONCLUSIONS

The growth of money supply in both domestic and international economies is necessary to facilitate the continued growth of economic activities. Too much money creates inflationary pressures and too little of it brings about deflationary pressures. The international monetary system--the system by which international payments and settlements take place--is subject to question because the increase in the annual production of gold has been less than the needs of international trade. Also, all international reserves have increased less than proportionately to the needs of the international economy. This poses a problem of liquidity in the international economy.

The various means used in international settlements: gold, dollars, pounds, and drawing rights on the IMF, and the role that each plays in the system were discussed. In addition to an introduction to the structure of the present international monetary system and the way that it came into existence, attention was focused on its performance and the factors affecting it. In order to deal with the problem of international liquidity short

term measures such as "swap" agreements, the General Arrangements to Borrow, and increases in IMF quotas were introduced into the system. These resulted in some improvement but were not sufficient in terms of long run needs. One problem is the fact that the key currency component of international reserves cannot increase indefinitely to keep pace with the growing needs of international trade. Elements of vulnerability enter the international monetary system to the extent that other countries do not want to accept U.S. and U.K. deficits indefinitely, that the problem of gold hoardings exist, that gold production increases by limited annual amounts, and finally that drawing rights on the IMF are limited and sometimes conditional.

In order to deal with these problems a large set of proposals have been suggested. These proposals were discussed under three main categories: a change in the price of gold, a flexible exchange rate system, and increasing international understanding and cooperation. This discussion was meant to evaluate the pros and cons of each group of proposals, upon which a further study of proposals could be based.

A review of the proposals suggested in the 1960's showed that Rueff supported a return to pure gold standard, and Lerner advocated doing away with gold. Another group of proposals for reform of the international monetary

system called for the acceptance of a flexible exchange rate system. Meade's plan was one such proposal. A third group of proposals centered around international understanding and/or cooperation. This group covered a wide range of suggestions. Lutz, Roosa, Bernstein, Zolotas, Maudling, Stamp, and Hansen advocated creation of an international unit of settlements; each of these individuals, however, used a different label for his proposed system. Keynes' and Triffin's plans were added to the analysis because of their pioneering significance.

Posthuma called for an agreement among major gold holding countries to take a lower percentage ratio of gold and a higher percentage ratio of foreign exchange. On the Hart, Kaldor, and Tinbergen Plan, it was pointed out that in contrast to many authors who have focused their attention on either the problem of inadequacy of international reserves and/or balance of payment adjustment, these three economists broadened their view and dealt with commodity price stabilization along with international liquidity.

The official and semi-official views of the IMF, the Group of Ten Governors, and the U.S. Joint Economic Committee were discussed. It was shown that these studies neither supported a rise in the price of gold nor the acceptance of a flexible exchange rate. The U.S. Joint Economic Committee, however, saw the latter as one to be studied further.

The negotiating aspects of the problem of making a choice between the alternative proposals, and of the relatively different attitudes and incentives of various countries throughout the world present obstacles to any agreement on reform measures. However, all countries saw the desirability of reform of the international monetary system.

Statistical study of the behavior of twenty selected countries revealed that there is no one behavior among countries with respect to how much reserves they have held for their imports. Interestingly enough, it was found that the Scandinavian countries have had a relatively low percentage ratio of reserves to their imports. On the other hand, the U.S. and Switzerland appeared to be holding high reserve-import percentages. Analysis further revealed that on the whole the twenty selected countries showed an average reserve-import ratio of less than fifty per cent.

A series of correlation analyses showed that a strong positive correlation existed between international trade as measured by imports (cif) and world gross product data. Next to this high positive correlation was the correlation between world product on the one hand and international trade and international reserves on the other. The analysis indicated that the gap between international reserves and the growing needs of international trade is widening, and that if the system is left

to itself without any shoring up, it is liable to failure and collapse.

Success criteria made it clear that it is unreasonable to expect that any one proposal can effectively cope with all the problems of international monetary system. It was indicated that the analysts' aims were different, and somewhat incompatible with one another, and that no proposal could be objectively proclaimed as best. Despite the fact that the variety of appraisals and suggestions could be interpreted as lack of essential consensus, the discussions showed a remarkable manifestation of ingenuity on the part of the economists, and were informative and conducive to the undertaking of reform by responsible authorities.

There was a sensible attempt to choose from different alternatives and to be selective about an alternative which, if not the best, will more likely give better results. The focus of the economists' as well as the practitioners' attention was, as a result, directed more and more toward further international cooperation in the form of reserve creation. Also, in search for selectivity the problem of long run provision for international liquidity seemed to be given priority over balance of payments adjustment, and the latter was dismissed from many of the proposals suggested in the 1960's.

The guidelines for the reform suggested that the

reform of the system must provide for non-inflationary expansion of world production and trade, that gold is too scarce a reserve asset to be assigned a quantitatively dominant role in international transactions, that mere reliance on additional supplies of dollar and/or pound liabilities for the secular growth of world reserves would be unwise, and that in view of the hesitation of many countries to tolerate undesirable consequences of adjustment to a balance of payments deficit in regard to their employment and national income creation of more international reserves under the supervision of an international agency is the most promising and the least damaging direction in which the reform can develop.

It was found that there is no indication that the monetary authorities of Switzerland, Germany, or any other country are anxious to see their money more widely used as international reserves. In view of the widening gap between the growth of international reserves and the growing needs of international economy, it was indicated that new arrangements need not shake the confidence placed on the dollar and need not interfere with the key currency role that dollars and to some extent sterling now play in the system. Furthermore, it was concluded that new arrangements need not be inconsistent with the present role that the IMF plays in international monetary affairs; in fact, the likelihood of success appeared to be larger if reliance were to be placed on the IMF.

It was shown that the probability of acceptance of created reserves could be higher if they were operationally interchangeable among central bankers and other monetary authorities of different countries, if they were convertible to gold, if they were capable of being enlarged or reduced depending on the circumstances of time, and if they were not to inspire reckless monetary management.

The objective was not merely to add one more proposal to the already existing stock of proposals for reform of the international monetary system. The direction in which the writer thinks reform will proceed is similar to the recent agreement achieved among the Governors of the Group of Ten before the 1967 Annual Meeting of the IMF in Rio de Janeiro and ratified by all members--which is, however, still subject to an agreement with respect to the rules of implementation.

APPENDICES

APPENDIX I

On November 18, 1967 the British pound was devalued by 14.3 per cent from $2.80 to the pound to $2.40 to the pound. The government of the U.K. decided that this action was necessary "in order to achieve a substantial surplus on the balance of payments consistent with growth and full employment."[1] Pierre-Paul Schweitzer, Managing Director of the IMF, has made the following remarks on this British devaluation:

> The Fund has indicated its agreement that the change is needed to deal with a fundamental disequilibrium reflected in the continued weakness in the balance of payments of the United Kingdom and, during the past few months, in heavy losses of reserves. Some of the causes of this weakness are temporary, but deficits in the current account have persisted despite determined and courageous efforts by the U.K. authorities to bring about a surplus.[2]

The U.K. Chancellor of the Exchequer clearly states that "We need an improvement in our balance of payments of at least 500 million pounds a year, and the Government intends to insure that this is achieved."[3] How successful the U.K. will be in this direction remains to be seen. It is hoped that the devaluation will bring with it "fresh

---

[1]Statement by James Callaghan, U.K. Chancellor of the Exchequer, November 18, 1967 reprinted in: International Monetary Fund, International Financial News Survey, Vol. XIX, No. 46 (Washington, D. C., November 24, 1967), p. 381.

[2]Ibid.

[3]Ibid.

opportunities"--but these will be at a heavy cost. The major advantage offered by the devaluation is to British exporters; they should be able to increase their exports by selling to overseas markets more British heavy manufactured goods such as motor vehicles, tractors, textiles, chemicals, ships, aircraft. Derivation of full benefit from the devaluation requires, however, that growth of domestic consumer demand must be reduced in order that a shift of resources to exports and imports saving be possible.

As of May 31, 1966 the United Kingdom had used its drawing rights on the IMF by 2435.5 million dollars on a net basis (net Fund sales of currency).[1] As of June 30, 1967 the same figure stood at 1862.6 million dollars.[2] These and similar figures indicate that the United Kingdom faced the weakness of its balance of payments long before the devaluation, partly due to a weakened competitiveness.

The par value of the pound sterling which became effective on November 18, 1967 is as follows, expressed in terms of gold and in terms of the U.S. dollar: 2.13281 grams of fine gold per pound sterling; 14.5833 pounds sterling per troy ounce of fine gold; 0.416667 pounds

---

[1]International Monetary Fund, International Financial Statistics, Vol. XIX, No. 7 (Washington, D. C., July 1966), p. 3.

[2]IMF, IFS, Vol. XX, No. 8, August 1967, p. 3.

sterling per U.S. dollar; 240.000 U.S. cents per pound sterling.[1]

In conjunction with devaluation, the Government of the United Kingdom raised the bank rate to eight per cent, requested a new stand-by arrangement in an amount equivalent to $1.4 billion, and announced its intention to carry out a program comprising credit and fiscal measures and a strengthening of prices and incomes policy. The IMF gave prompt attention to, and indicated a favorable attitude toward, the request for $1.4 billion of stand-by arrangements. It is hoped that the devaluation will not only make it possible for the U.K. to improve its balance of payments, but also to rebuild gradually its reserves while repaying the large debts incurred in recent years and allowing for adequate growth in the economy.

It is questionable whether any external help, while possibly effective in postponing the recent British devaluation of the pound, could have definitely prevented it. As there are still economies which have their foreign trade with Britain and still keep part of their international reserves--though to a lesser extent--in the form of British pound, whatever the effects of devaluation might be on the economy of the United Kingdom, from the standpoint of international liquidity the move has doubtless

---

[1]International Financial News Survey, op. cit., p. 382.

helped maintenance and continuance of the key currency position of the pound in the international economy. It can be hoped that with the introduction of SDR's, key currency countries would face less periods of strain to the extent that Britain recently experienced, and the possibility of further future devaluations can be reduced.

The governments of Ireland, Israel, Guyana, Spain, Cyprus, Malawi, Denmark, New Zealand, Jamaica, and Ceylon have proposed changes in the par value of their currencies following the British devaluation.[1] After devaluation of the pound, a gold rush began. According to a report of the Associated Press, in order to limit gold speculators, maneuvering central bankers of the seven members of the London gold pool (the United States, Britain, Switzerland, West Germany, Italy, Belgium, and the Netherlands) met in Basel, Switzerland on the ninth and tenth of December, 1967, and formulated a new gold strategy for the world gold market.[2] The new strategy is based on a pledge to cooperate in supplying gold buyers from the reserves of the central banks mentioned above at the official U.S. price of $35 per ounce. Under the new strategy, the central banks of the seven gold pool countries also agreed to ban gold sales

---

[1]For new par values of their currencies see the source of the above footnote.

[2]Reprinted in the Oklahoma Daily, Norman, Oklahoma, No. 68, Thursday, December 14, 1967, p. 4, columns 1-3.

on credit or for future delivery. The move was primarily intended to protect the U.S. dollar but was possibly designed also to put a squeeze on France. Since the Bank of France has dropped out of the London Gold Pool, the French may have to bear the brunt of private speculative hoarding.

At the time these lines are written, the outcome is not quite clear. The first indications, however, are that speculators already are being frozen out of their past sources and are turning to the Paris gold market or to less serious speculation in silver.

APPENDIX II

GOLD DISHOARDING

So far nothing has been said about the problem of gold hoards. As gold still constitutes a vital component of international reserves, no discussion of international liquidity is complete without touching, at least briefly, on this topic. Accordingly, in what follows an attempt will be made to look at some of the factors related to gold hoards. It must be emphasized at the beginning, however, that precise information on this topic is lacking.

Due to the existence of gold hoards, not all gold produced becomes available for the use of monetary authorities; no one knows precisely how much gold goes into hoards. It is not the theme of this study to recommend an increase in the available supply of monetary gold as the solution to the problem of international liquidity. This should not, however, be taken to mean that the world's monetary liquidity can be increased by drawing the amount of hoarded gold into the monetary use.

The analysis of gold hoards necessitates an understanding of the supply of and the demand for gold. The supply of gold for monetary use can be increased as a result of any or a combination of the following factors: 1) increase in the free world's gold production from existing mines, 2) discovery of new gold mines (subject to

prevailing costs of production at different times),
3) sales or other transfers of gold by the Soviet Union or other countries in the Communist bloc to the West, and
4) release of gold by gold hoarders. It must be noted here that not all of these factors lend themselves to quantitative measurements. For example, someone who hoards gold in secret vaults may keep it there indefinitely and might never be found out.

On the demand side, one can see the following uses for gold: 1) industrial and artistic uses, 2) means of payment for official users in international transactions, 3) means of payment or settlement for private individuals, 4) a legal cover for currency circulation and occasionally for other liabilities, and 5) the use of gold for traditional ceremonies in some countries. Again, on the demand side, not all of these are subject to quantitative measurement.

Another question concerning gold in this context is: Why does gold hoarding exist? A simple and definitive answer cannot be given to this question; yet, it would seem that the following reasons for gold hoarding might be pertinent:
1) to keep a gold reserve for the rainy days when domestic money and/or foreign exchange may not be adequate or acceptable for the urgent needs of individuals;
2) to keep precautionary official gold reserves for use

in international settlements or for backing of the domestic currency;

3) to avoid losses as a result of rumors of a major devaluation;

4) and to some extent, expectation of profit as a result of possible upward valuation of the price of gold or a decrease in the price of commodities for speculators. Not all of these reasons lend themselves to quantitative measurements and analyses. In view of the unquantifiable nature of some of the factors affecting supply of and demand for gold, as well as motivations behind its hoarding, it is not surprising that the question of gold hoarding remains so unclear even for professional analysts and international institutions.

Despite this unquantifiable and sometimes unpredictable nature of the factors affecting gold hoarding, analysts can devise ways to increase the effective use of gold for the purpose of international liquidity. The next question, then, is: What could be done to reduce, or completely eliminate, gold hoardings?

Several economists have answered this question, each in a different manner. On the one hand, one can find proposals which suggest a definite program of periodic small increases in the price of gold. For example, Miyata and Wonnacott have suggested that governments may make a firm declaration on a definite increase in the

price of gold, as much as one per cent every six months, but in any case less than the interest rate; gold speculators, so the argument runs, could make no profits from the periodic increases in the monetary price of gold.[1] This plan is a poor way to discourage hoarding. Its success rests upon the assumption that a firm declaration will be in regard to the upward rise in the price of gold and then action will be taken accordingly; this is not a practical assumption for all governments today. In addition, the expectation of an upward increase in the price of gold is the very factor which motivates some hoarding. How, then, can one maintain that the periodic definite increases would eliminate hoardings? Finally, gold is still a partial backing for domestic currency in many countries, and an increase in its price would mean a devaluation of those currencies in terms of gold.

Because of all these disadvantages, other economists have turned their attention to a decrease in the price of gold. Fritz Machlup, for example, thinks that the buying price of gold should be reduced by a series of steps in the following manner:

> If the leading monetary authorities of the free world were to reduce, over a period of several years, the price of gold by, say, three fourths of one per cent

---

[1]Kiyozo Miyata, "A Proposal to Increase the Price of Gold" in Factors Affecting U.S. Balance of Payments, op. cit., p. 228; and Paul Wonnacott, "A Suggestion for the Revolution of Gold," ibid. Sir Roy Harrod is also a remarkable example in this group.

> every three months, one could expect that several billion dollars' worth of gold would be de-hoarded and offered for sale to the monetary authorities. . . . As soon as the speculators are convinced that they could buy all the gold they wanted, and at a reduced price if they waited a while, they would be transformed from buyers into sellers. . . . The chief objective would be to make it perfectly clear all around that gold holders may lose money. If capital losses were just as likely as capital gains, then gold would no longer be the object of hoarding and speculation for a rise.[1]

It is interesting to note that in Machlup's opinion a plan for reducing the price of gold can always be made the subject of public discussion with the favorable result of a contraction in gold hoardings. Machlup's plan in this context seems more logically acceptable, especially in view of the fact that an announcement of a reduction in the price of gold would threaten gold hoarders.

A third means of reducing gold hoards is compulsory cashing-in of gold by individuals. In 1933 the U.S. Congress authorized the Secretary of the Treasury "to require every person in the United States to relinquish, in exchange for dollar currency, all gold coins, gold bullion and gold certificates in his possession." By the end of March, 1933, as Hansen reports, the public had surrendered $200 million worth of gold, and another $30 million or so was relinquished in April.[2]

---

[1]Machlup, "Factors Affecting the United States Balance of Payments," op. cit., p. 226.

[2]Hansen, op. cit., p. 63.

Critics of this system assert that prohibition or elimination of individual gold holdings amounts to confiscation of private property. This is not really a serious criticism. All citizens who respond to a compulsory cashing-in of gold are compensated, and since individuals are given the right to either surrender their gold or to suffer the loss, if they do not choose the first alternative the loss is their own fault and does not constitute a confiscation of private property.

Howard Piquet has proposed another plan which calls for the U.S. to announce that while it would continue to sell gold at $35.0875 per ounce, it will no longer guarantee to buy gold at $34.9125 an ounce. According to Piquet, mere announcement of such a plan might frighten gold hoarders to the extent of causing them to put their gold on the market at a lower price.[1]

Such an announcement may affect gold hoarders psychologically, but to what extent it will have a noticeable impact, especially for the U.S. position remains an open issue.

Still another plan is offered by Lerner. Since his slogan: "Let us Get Rid of Our Cross of Gold" has been discussed in an earlier chapter, it will be dismissed here. Hansen, too, mentions that "gold no longer controls

---

[1]Howard S. Piquet, "Some Consequences of Dollar Speculation in Gold" in Factors Affecting the U.S. Balance of Payments, op. cit., pp. 305-324.

the domestic money supply of any leading industrial country. Everywhere deliberate monetary management has taken the place of the automatic gold standard."[1]

Hansen's proposal is based on two possible plans: first, a full-scale gold value guarantee, second a risk sharing scheme. With respect to the former, Hansen asserts:

> Let the United States offer to all official holders of dollar balances a firm gold-exchange guarantee under which losses sustained by official holders in the event of a future devaluation of the dollar would be fully compensated. To insure complete confidence in this exchange guarantee, let the U.S. government pledge that all the gold profits made by the U.S. Treasury from the devaluation would be applied to indemnify the losses suffered by foreign official holders of dollar balances.[2]

A risk sharing scheme can, according to Hansen, take one of two forms: First, official dollar holders can be given the privilege of escape from the risk of devaluation by accepting non-interest bearing gold certificates in lieu of their dollar holdings. This would imply that official dollar holders would lose the advantage of earning about a three per cent rate of interest on their reserve holdings in exchange and as a trade-off for the advantage of escape from possible devaluation losses. Second,

> Let the United States offer gold certificates bearing 2 per cent interest. Official holders would lose some interest as compared with the continued holdings of dollars, but they would be compensated for this by escaping possible devaluation losses. . . .

---

[1]Hansen, op. cit., p. 59.

[2]Ibid., pp. 71-72.

> Foreign official holders would then have the free choice of holding their reserves in any one of three forms and in such proportions as they might with: (1) gold, (2) low-interest bearing gold certificates, and (3) dollars.[1]

The above selection of plans shows that the problem of gold hoarding is, like the problem of international liquidity, a controversial subject, though to a lesser degree. It would seem, however, that international cooperation can affect the problem of hoarding very greatly. For example, if all members of the Fund agree to make it illegal for individuals to hold more than a limited amount of gold (other than for dental and artistic uses) many gold hoards would then be released by the government purchase of this gold. This approach, however, is not feasible at the present time, and so long as the difference of regulations with respect to gold holding exists between countries, gold can easily be transferred from one to another country. There are, of course, unilateral methods within the power of certain countries such as the U.S. which can be effected such as offering a gold-value guarantee to all official (and probably non-official holders) of dollars, or spreading the Treasury's selling and buying price of gold up to 1 per cent below and above the par value. However, there is no accurate way of measuring the effects of such measures and therefore not too much reliance can be placed on such attempts to dehoard

---

[1] Ibid., p. 76.

gold. As a result this line of attack upon the international liquidity problem will be dismissed as impractical or highly uncertain.

APPENDIX III

OFFICIAL RESERVES HELD, IMPORTS, AND RATIO OF RESERVES TO IMPORTS FOR SELECTED COUNTRIES (1948-1966)
(in millions of U.S. dollars)

	JAPAN			AUSTRALIA			CANADA		
YEAR	R*	I*	%R to I*	R*	I*	%R to I*	R*	I*	%R to I*
1948	n.a.	684	--	1723	1411	122.1	1086	3014	36.0
49	n.a.	905	--	1123	1592	70.5	1197	2884	41.5
1950	n.a.	974	--	1492	1622	92.0	1845	3128	59.0
51	n.a.	1995	--	1134	2422	46.8	1901	4106	46.3
52	1101	2028	54.3	1032	1979	52.1	1938	4370	44.3
53	892	2410	37.0	1362	1471	92.6	1902	4697	40.5
54	930	2399	38.8	1133	1869	60.5	2029	4433	45.8
1955	1076	2471	43.6	844	2160	39.1	1985	5020	39.5
56	1270	3230	39.3	961	1964	48.9	2035	6110	33.3
57	828	4284	19.3	1329	1945	68.9	1926	6188	31.1
58	1062	3033	35.0	1128	2039	55.3	2038	5638	36.1
59	1447	3599	40.2	1273	2125	59.9	2029	6242	32.5
1960	1949	4491	43.4	915	2704	33.8	1989	6150	32.3
61	1666	5811	28.7	1348	2394	56.3	2276	6196	36.7
62	2022	5637	35.9	1387	2551	54.4	2547	6367	40.0
63	2058	6737	30.6	1880	2776	67.7	2603	6618	39.3
64	2019	7948	25.4	1947	3313	58.8	2881	7556	38.1
1965	2152	8156	26.3	1531	3672	41.6	3027	9898	30.5
66	2119	10222	20.7	1568	3530	44.4	2693	10962	24.5

Source: Data for 1948 to 1964 are from the International Monetary Fund, International Financial Statistics, Supplement to 1965/66 Issues (Washington, D. C.), p. v for reserves and p. xvii for imports. Data for 1965 and 1966 are taken from the IMF, IFS, Vol. 20, August 1967, p. 16 for reserves, and p. 35 for imports.

Notes: Imports are at cif value as quoted in IFS; reserves are as of the end of each year.

* R = Reserves; I = Imports; %R to I = percentage ratio of reserves to imports.

APPENDIX III (cont.)

YEAR	GERMANY			AUSTRIA			SWEDEN		
	R*	I*	%R to I*	R*	I*	%R to I*	R*	I*	%R to I*
1948	295	n.a.	n.a.	62	490	12.6	233	1377	16.9
49	196	n.a.	n.a.	92	592	15.5	269	1171	23.0
1950	190	2697	7.0	91	477	19.1	289	1182	24.5
51	455	3491	13.0	106	653	16.2	520	1776	29.3
52	960	3814	25.2	152	652	23.3	504	1730	29.1
53	1773	3771	47.0	325	646	59.5	558	1579	35.3
54	2579	4571	56.4	425	653	65.1	543	1776	30.6
1955	3018	5793	52.1	374	887	42.2	522	1997	26.1
56	4202	6617	63.5	419	974	43.0	535	2209	24.2
57	5197	7542	68.9	523	1128	46.4	501	2428	20.7
58	5879	7576	77.6	678	1074	63.1	516	2368	21.8
59	4790	8482	56.5	697	1145	60.9	478	2414	19.8
1960	7032	10107	69.6	716	1416	50.6	528	2901	18.2
61	7163	10948	65.4	845	1485	56.9	736	2929	25.1
62	8956	12289	56.6	1081	1553	69.7	801	3123	25.7
63	7650	13022	58.8	1229	1675	73.4	758	3393	22.3
64	7882	14618	53.9	1317	1863	70.7	964	3855	25.0
1965	7429	18880	39.3	1311	2367	55.3	972	4675	20.7
66	8028	18526	43.3	1333	2414	55.2	1027	4840	21.2

* R = Reserves; I = Imports; %R to I = Percentage Ratio of Reserves to Imports.

APPENDIX III (cont.)

YEAR	NORWAY			ITALY			DENMARK		
	R*	I*	%R to I*	R*	I*	%R to I*	R*	I*	%R to 1*
1948	144	750	19.2	n.a.	1539	--	84	714	11.7
49	104	779	13.3	n.a.	1545	--	87	807	10.7
1950	125	679	18.4	602	1488	40.5	97	853	11.3
51	163	878	18.5	774	2167	35.7	118	1013	11.6
52	164	874	18.7	696	2336	29.8	142	962	14.7
53	156	912	17.1	768	2420	31.7	167	1000	16.7
54	151	1019	14.8	927	2439	38.0	144	1170	12.3
1955	178	1090	16.3	1167	2711	43.0	140	1178	11.8
56	191	1211	15.7	1236	3174	38.9	138	1311	10.5
57	197	1274	15.4	1354	3674	36.9	172	1359	12.6
58	256	1310	19.5	2184	3216	67.9	230	1347	17.0
59	281	1323	21.2	3056	3369	90.7	328	1602	20.4
1960	308	1462	21.0	3251	4725	68.8	286	1806	15.8
61	303	1616	18.7	3799	5223	72.7	282	1873	15.0
62	304	1664	18.2	3818	6075	62.9	256	2130	12.0
63	354	1822	19.4	3406	7590	44.9	470	2129	22.0
64	387	1984	19.5	3823	7231	52.9	645	2614	24.6
1965	476	2335	20.3	4800	8082	59.3	587	2907	20.2
66	527	2871	18.3	4911	9147	53.6	597	3283	18.1

* R = Reserves; I = Imports; %R to I = Percentage Ratio of Reserves to Imports.

APPENDIX III (cont.)

YEAR	BELGIUM			NEW ZEALAND			GREECE		
	R*	I*	%R to I*	R*	I*	%R to I*	R*	I*	%R to I*
1948	987	2046	48.2	236	450	52.4	91	364	25.0
49	978	1803	54.2	151	449	33.6	77	484	15.9
1950	849	1942	43.7	172	455	37.8	83	428	19.3
51	1100	2535	43.8	217	596	36.4	87	398	21.8
52	1133	2444	46.4	183	773	23.6	94	346	27.1
53	1144	2413	47.4	271	538	50.3	140	296	47.3
54	1098	2535	43.3	238	688	34.5	148	330	44.8
1955	1203	2830	42.5	178	802	22.1	201	382	52.6
56	1219	3288	37.1	200	751	26.6	204	464	43.9
57	1148	3444	33.3	152	832	18.2	193	524	36.8
58	1553	3129	49.6	187	798	23.4	170	565	30.0
59	1306	3442	37.9	217	648	33.5	225	567	39.6
1960	1506	3969	37.9	188	790	23.8	238	702	33.9
61	1813	4223	46.9	137	904	15.1	266	714	37.2
62	1753	4569	46.9	171	756	22.6	285	701	40.6
63	1940	5112	47.3	143	903	15.8	293	804	36.4
64	2192	5901	37.2	166	961	17.2	281	885	31.7
1965	2304	7174	32.1	97	1082	8.9	250	1305	19.1
66	2320	7531	30.8	95	1076	8.8	273	1399	19.5

* R = Reserves; I = Imports; %R to I = Percentage Ratio of Reserves to Imports.

APPENDIX III (cont.)

YEAR	TURKEY			ARGENTINA			VENEZUELA		
	R*	I*	%R to I*	R*	I*	%R to I*	R*	I*	%R to I*
1948	198	348	56.8	704	1562	45.0	390	814	47.9
49	206	346	59.5	477	1180	40.4	449	796	56.4
1950	201	311	64.6	655	964	67.9	378	667	56.6
51	216	407	53.0	520	1480	35.1	377	761	49.5
52	198	556	35.6	420	1179	35.6	443	845	52.4
53	208	532	39.1	531	795	66.7	484	916	52.8
54	204	478	42.6	524	979	53.5	482	1024	47.0
1955	208	498	41.7	457	1173	38.9	534	1058	50.4
56	225	407	55.2	382	1128	33.8	952	1249	76.2
57	268	397	67.5	286	1310	21.8	1459	1868	78.1
58	286	315	90.7	129	1233	10.4	1062	1599	66.4
59	144	470	30.6	276	993	27.7	724	1577	45.9
1960	203	468	43.3	525	1249	42.0	609	1188	51.2
61	194	509	38.1	386	1460	26.4	580	1092	53.1
62	189	622	30.3	114	1357	84.0	583	1096	53.1
63	178	691	25.7	270	981	27.5	745	950	78.4
64	144	542	26.5	153	1077	14.2	831	1155	71.9
1965	141	587	24.0	236	1174	20.1	843	1576	53.4
66	131	743	17.6	215	1211	17.7	776	1162	66.7

* R = Reserves; I = Imports; %R to I = Percentage Ratio of Reserves to Imports.

APPENDIX III (cont.)

YEAR	FRANCE			NETHERLANDS			SWITZERLAND		
	R*	I*	%R to I*	R*	I*	%R to I*	R*	I*	%R to I*
1948	553	3443	16.0	343	1871	18.3	1661	1163	142.8
49	580	3291	17.6	434	1844	23.5	1693	882	191.8
1950	791	3030	26.1	548	2056	26.7	1579	1056	149.5
51	616	4457	13.8	554	2553	21.7	1645	1375	119.6
52	686	4326	15.9	944	2224	42.4	1667	1208	138.0
53	829	3942	21.0	1232	2376	51.9	1768	1176	150.3
54	1264	4221	29.9	1278	2858	44.7	1837	1300	141.3
1955	1975	4739	41.7	1292	3209	40.3	1847	1489	124.0
56	1311	5558	23.6	1107	3725	29.7	1882	1766	106.6
57	645	6175	10.5	1009	4106	24.6	1898	1964	96.6
58	1050	5609	18.7	1539	3625	42.5	2063	1706	120.9
59	1736	5088	34.1	1442	3940	36.6	2063	1923	107.3
1960	2272	6281	36.2	1863	4531	41.1	2324	2243	103.6
61	3799	6679	56.9	1958	5089	38.5	2759	2707	101.9
62	4049	7517	53.9	1946	5347	36.4	2872	3020	95.1
63	4908	8727	56.2	2101	5966	35.2	3078	3253	94.6
64	5724	10070	56.8	2349	7055	33.3	3123	3610	86.5
1965	6343	11356	55.8	2416	8359	28.9	3244	3884	83.5
66	6733	12756	52.7	2448	8100	30.2	3324	4143	80.2

* R = Reserves; I = Imports; %R to I = Percentage Ratio of Reserves to Imports.

APPENDIX III (cont.)

YEAR	UNITED KINGDOM			UNITED STATES		
	R*	I*	%R to I*	R*	I*	%R to I*
1948	2009	8447	23.7	25758	8081	318.7
49	1752	8522	20.6	26024	7544	345.0
1950	3443	7358	46.8	24265	9631	251.9
51	2374	10955	21.7	24299	11922	203.8
52	1958	9802	20.0	24714	11707	211.1
53	2670	9314	28.7	23458	11846	198.0
54	3034	9405	32.3	22978	11140	206.3
1955	2392	10809	22.1	22797	12489	182.5
56	2276	10812	21.1	23666	13987	169.2
57	2374	11322	21.0	24832	14620	169.9
58	3105	10493	29.6	22540	14619	154.2
59	2801	11153	25.1	21504	17008	126.4
1960	3719	12714	29.3	19359	16506	117.3
61	3318	12308	27.0	18753	16071	116.7
62	3308	12563	26.3	17220	17764	96.9
63	3147	13476	23.4	16843	18590	90.6
64	2316	15438	15.0	16672	20251	80.3
1965	3004	16429	18.2	15450	25636	60.2
66	3100	15859	19.5	14881	29379	50.6

* R = Reserves; I = Imports; %R to I = Percentage Ratio of Reserves to Imports.

BIBLIOGRAPHY

Books

Alchian, Armen A. and Allen, William R. University Economics. Belmont, California: Wadsworth Publishing Company, Inc., 1964.

Clement, M. O.; Pfister, Richard L.; and Rothwell, Kenneth J. Theoretical Issues in International Economics. Boston: Houghton Mifflin Co., 1967.

Croxton, Frederick E. and Cowden, Dudley J. Applied General Statistics. Second ed., Englewood Cliffs, N. J.: Prentice-Hall, Inc., 1960.

Fite, Gilbert C. and Reese, Jim E. An Economic History of the United States. Cambridge, Massachusetts: Houghton Mifflin Company, 1959.

Halm, George. International Monetary Cooperation. Chapel Hill: The University of North Carolina Press, 1945.

Hansen, Alvin H. The Dollar and the International Monetary System. New York: McGraw-Hill Book Company, 1965.

Higgins, Benjamin. Economic Development. New York: W. W. Norton and Company, Inc., 1959.

Hutchinson, Harry D. Money, Banking, and the United States Economy. New York: Appleton-Century-Crofts, 1967.

Jensen, Finn B. and Walter, Ingo. Readings in International Economic Relations. New York: The Ronald Press Company, 1966.

Johnston, Lee J. Econometric Methods. New York: McGraw-Hill Book Company, Inc., 1963.

Keynes, John M. A Treatise on Money. New York: Harcourt, Brace and Co., 1930.

Leibenstein, Harvey. Economic Backwardness and Economic Growth. New York: John Wiley & Sons, 1957.

Patinkin, Don. Money, Interest and Prices. New York: Harper and Row, Publishers, 1965.

Roosa, Robert. Monetary Reform for the World Economy. New York: Harper and Row, Publishers, 1965.

Shannon, Ian. International Liquidity--A Study in the Economic Functions of Gold. Chicago: Henry Regnery Company, 1966.

Smith, Warren L. and Teigen, Ronald. Readings in Money, National Income, and Stabilization Policy. Homewood, Illinois: Richard D. Irwin, Inc., 1956.

Snider, Delbert A. Introduction to International Economics. Homewood, Illinois: Richard D. Irwin, Inc., 1963.

Triffin, Robert. Gold and the Dollar Crisis. Revised; New Haven, Connecticut: Yale University Press, 1961.

_____. The World Money Maze. New Haven, Connecticut: Yale University Press, 1966.

Ward, Richard. International Finance. Englewood Cliffs, N. J.: Prentice-Hall, Inc., 1965.

Wooley, Herbert B. Measuring Transactions Between World Areas. New York: National Bureau of Economic Research, 1966.

Periodicals

Altman, Oscar L. "A Note on Gold Production and Additions to International Gold Reserves," International Monetary Fund Staff Papers (Washington, D. C., April 1958), p. 282.

_____. "Professor Triffin on International Liquidity and the Role of Fund," I.M.F. Staff Papers, Vol. 8 (Washington, D. C., May 1961), p. 188.

Angell, James W. "The Reorganization of the International Monetary System: An Alternative Proposal," The Economic Journal, Vol. 71 (December 1961), p. 707.

The Economist, no vol. given (September 2, 1967), p. 800.

Fleming, Marcus J. "Toward Assessing the Need for International Reserves," Essays in International Finance, No. 58 (Princeton, N. J.: Princeton University--International Finance Section, February 1967), p. 1.

Harrod, Sir Roy. "World Reserves and International Liquidity," The South African Journal of Economics, Vol. 35, No. 2 (June 1967), p. 93.

Hawkins, Robert G. (ed.). "Compendium of Plans for International Monetary Reform," The Bulletin, No. 37-38 (New York: C. J. Devine Institute of Finance, December 1965), pp. 60-68.

International Monetary Fund. International Financial Statistics, Vol. 11, No. 8, p. 15; No. 12, p. 4 (1958); Vol. 19, No. 7 (1965); Vol. 20, No. 8, pp. 16 ff. (1967) (Washington, D. C.).

_____. Compensatory Financing of Export Fluctuations (Washington, D. C., 1963), p. 11.

_____. International Financial News Survey, Vol. XIX, No. 46 (Washington, D. C., November 24, 1967), p. 381.

"International Monetary Fund," International Financial Statistics, Supplement to 1965, 66 (Washington, D. C.).

Keynes, J. M. "The Balance of Payments of the United States," Economic Journal, Vol. LVI, No. 222 (June 1946), p. 171.

Kindelberger, Charles. "The Politics of International Money and World Language," Essays in International Finance, No. 61 (Princeton, N. J.: Princeton University--International Finance Section, August 1967), p. 2.

Kriz, Miroslav A. "Gold: Barbarous Relic or Useful Instrument?," Essays in International Finance, No. 60 (Princeton, N. J.: Princeton University--International Finance Section, June 1967), 29.

Lutz, Friedrick A. "The Problems of International Liquidity and the Multiple-Currency Standard," Essays in International Finance, No. 41 (Princeton, N. J.: Princeton University--International Finance Section, 1963), p. 9.

Machlup, Fritz. "The Need for Monetary Reserves," Reprints in International Finance, No. 5 (Princeton, N. J.: Princeton University--International Finance Section, October 1966), p. 1.

_____. "World Monetary Debate--Bases for Agreement," Reprints in International Finance, No. 4 (Princeton, N. J.: Princeton University--International Finance Section, September 1966).

_____. "Plans for Reform of the International Monetary System," Special Papers in International Economics, No. 3, Revised (Princeton, N. J.: Princeton University--International Finance Section, March 1964).

_____. "International Monetary System and the Free Market Economy," Reprints in International Finance (Princeton, N. J.: Princeton University--International Finance Section, No. 3, February 1966; No. 4, September 1966).

_____. "The Cloakroom Rule of International Reserves: Reserve Creation and Resources Transfer," The Quarterly Journal of Economics, Vol. LXXIX, No. 3 (August 1965), pp. 337-355.

McKinnon. "Optimum World Monetary Arrangement, and the Dual Currency System," Banca Nazionale del Lavoro (del Lavoro; December 1963), pp. 366-96.

Mundell, R. A. "A Theory of Optimum Currency Area," American Economic Review, Vol. 51 (September 1961), pp. 657-665.

Lerner, Abba P. "Let's Get Rid of Our Cross of Gold," Challenge, The Magazine of Economic Affairs, Vol. 12 (1964), p. 22.

Posthuma, S. "The International Monetary System," Quarterly Review, No. 66 (Banco Nazionale del Lavoro, September 1963).

Robertson, D. H. "Post-War Monetary Plans," Economic Journal, Vol. 53 (December 1943), p. 359.

Roosa, Robert. "Balance of Payments Adjustment and International Liquidity," Journal of Finance, Vol. 19 (March 1964), p. 1.

Ruff, Gunther. "A Dollar-Reserve System as a Transitional Solution," Essays in International Finance, No. 57 (Princeton, N. J.: Princeton University--International Finance Section, January 1967), p. 7.

Rueff, Jacques. "The West Is Risking a Credit Collapse," Fortune, Vol. 64 (July 1961), p. 126.

Scitovsky, Tibor. "A New Approach to International Liquidity," The American Economic Review, Vol. LVI, No. 5 (Homewood, Illinois: American Economic Association, December 1966), p. 122.

Tew, Brain. "The International Monetary Fund," Essay in International Finance, No. 36 (Princeton, N. J.: Princeton University--International Finance Section, March 1961), p. 3.

Triffin, Robert. "From Waterloo to Tokyo," The Economist, Vol. 208 (August 15, 1964), p. 659.

Wang, N. T. "New Proposals for the International Finance of Development," Essays in International Finance, No. 59 (Princeton, N. J.: Princeton University--International Finance Section, April 1967), p. 1.

Williams, John H. "Currency Stabilization: The Keynes and White Plans," Foreign Affairs, (July 1943), p. 649.

Williamson, John H. "Liquidity and the Multiple Key Currency Proposal," The American Economic Review, Vol. LIII (June 1963), pp. 430-431.

Public Documents

Bank of Greece. Alternative Systems for International Monetary Reform--A Comparative Appraisal. Bank of Greece Papers and Lectures, Xenophon Zolotas, Governor, No. 18, 1965.

Board of Governors, Federal Reserve System. Federal Reserve Bulletin, XXXIII, No. 8 (Washington, D. C., August 1967), 1446.

_____. Federal Reserve Bulletin (November 1933), 699.

Group of Ten. Communiqué of Ministers and Governors and Report of Deputies. (Hague, July 7, 1966).

Group of Ten. Ministerial Statement of the Group of Ten and Annex Prepared by Deputies (10th August, 1964), 1.

_____. Report of the Study Group on the Creation of Reserve Assets (Washington, D. C.: U. S. Government Printing Office, May 31, 1965).

International Monetary Fund. 1963 Annual Report (Washington, D. C.), p. 29.

_____. 1964 Annual Report (Washington, D. C.), p. 27 ff.

_____. 1965 Annual Report (Washington, D. C.), p. 14.

_____. Summary Proceedings of the Twelfth Annual Meeting of the Board of Governors (Washington, D. C., 1957), p. 2.

_____. International Reserves and Liquidity (Washington, D. C., Aug. 15, 1958), 94.

_____. Summary Proceedings. Annual Meeting (Washington, D. C., 1962), pp. 60, 68.

International Monetary Fund. A Note on Gold Production and Additions to International Gold Reserves (Washington, D. C., April 1958), 282.

Mikoto, Usui and Hagen, Everett. World Income, 1957. (Cambridge, Mass.: Massachusetts Institute of Technology--Center for International Studies, 1959).

United Nations. Statistical Yearbook (1964), 543.

United Nations, Committee on Invisibles and Financing Related to Trade. Memorandum on International Liquidity, No. 4 (Geneva, 1966), 7-10.

United Nations, Conference on Trade and Development. Memorandum: The Case for an International Commodity Reserve Currency. Submitted to the Conference by Hart, Albert G., Kaldor, Nicholas, and Tinbergen, Jan (Geneva, March 28-June 15, 1964).

U.S. Congress, Joint Economic Committee. Hearings: The United States Balance of Payments, Part I (1963), 96-101.

_____. Hearings: Outlook for the United States Balance of Payments. 87th Cong., 2nd Session (1965).

U.S. Congress, Joint Economic Committee. International Effects of U.S. Economic Policy, 86th Cong., 2nd Session (1960).

_____. Factors Affecting the United States Balance of Payments. 87th Cong., 2nd Session (1962).

U.S. Congress, Subcommittee on International Exchange and Payments of the Joint Economic Committee. Statement of the Honorable Fowler, Henry H., Secretary of Treasury (September 14, 1967).

U.S. Treasury Department. Treasury Bulletin (Washington, D. C., September 1967), 91.

Other Sources

Kondanassis, A. J. "Concepts of Economic Development with Special Reference to Underdeveloped Countries" in The Emergent Nations. Monograph No. 1, Graduate International Studies Program (Norman: University of Oklahoma Press, 1963), p. 81.

Oklahoma Daily, Norman, Oklahoma, No. 68, Thursday, December 14, 1967, p. 4.